PHILOSOPHY OF POPULATION CENSUS IN NIGERIA

L. Chad
Kainji Dam
Males
Females
80 +
70-74
60-64
50-54
40-44
30-34
20-24
10-14
0 - 4
10 8 6 4 2 0
0 2 4 6 8 10
Percentage
ATLANTIC
OCEAN

EDITED BY

O. O. AROWOLO
O. DARAMOLA

NATIONAL POPULATION COMMISSION

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Edited by

O. O. AROWOLO, M.A., Ph.D.
O. DARAMOLA, B.Sc. (Hons)

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PREFACE

The Population Commission is the only constitutionally recognized government agency charged with the responsibility of population census operations in Nigeria. By organizing this seminar to discuss the population census issue with its underlining philosophy, the Commission has openly demonstrated its commitment to national duty.

That the duty of conducting a hitch-free national population census which would be acceptable to professionals as well as the public is not an easy one is borne out by the chequered history of census operations in Nigeria. As a testimony to the multidimensional character of the subject, the conference attracted a catholic variety of specialists, ranging from mass media practitioners to a fairly large crop of demographers throughout the country.

Judged by the nature and number of papers presented, the numerous issues raised and group debates on aspects of the Commission's philosophy of population census, there is perhaps no other issue of public and professional interest that is more controversial than the procurement of a *modus operandi* for a successful population enumeration in Nigeria.

In the end; the conference spelt out for public consumption the procedure to be adopted in educating the public about the meaning and utility services of accurate population census figures. It also proferred solutions to the intractable problem of politics in population enumeration, so as to ensure that the Commission's work is not marred by political bigotry. The need for accurate population census data is further amplified by scholarly papers and lively debate on the relationship between population and development.

The editorial judgement is that this document represents a technical blueprint for the commission in planning for the next population census in Nigeria. It is also a volume that provides useful information to all those who wonder why Nigeria should embark upon another population census exercise as a matter of urgency.

O. O. Arowolo

COMMUNIQUE

NATIONAL POPULATION COMMISION, LAGOS; NATIONAL CONFERENCE ON THE PHILOSOPHY OF POPULATION CENSUS

1. The Conference on the Philosophy of Population Census, organized by the National Population Commission, was held between February 1 and 5, 1982 at the Conference Centre of the University of Ibadan. The Conference attracted participants from all the universities, state ministries, the private sector and sections of the news media from all parts of the federation.

2. Papers were presented by experts on the major themes that constitute the import of the Commission's philosophy: namely;
   - (i) meaning and utility services of population census data;
   - (ii) strategies for depoliticizing population censuses;
   - (iii) ways of educating the public about the importance of population census;
   - (iv) how to obtain meaningful population figures;
   - (v) relationship between population and development, and,
   - (iv) using the population census to evaluate human resources.

3. The following recommendations were made:
   - (i) That in order to ensure a more effective planning for the socio-economic development of Nigeria, there is need for adequate population census data about the size and certain social, economic and demographic characteristics of the country's population.
   - (ii) That given the experience in census-taking in Nigeria with the political factor already identified as an impediment to accurate population enumeration, the following steps should be taken in preparing for the next census to depoliticize the census issue:
     - (a) That the federal, as well as state governments should undertake imaginative programmes of *even* development throughout the country with a view to ensuring that certain basic amenities (water, education, electricity, roads, communication, health, etc;) are available to enable communities irrespective of population size, apply their skills, experience and mental physical,

resources in creative, productive and developmental activities.

(b) That the number of representatives in the national assemblies, state assemblies and local government councils as reflected and in accordance with size of population, should be frozen at their current levels for a period of four to five years beyond the next census, to enable checks and balances both internally and externally to be effectively carried out to standard conclusion.

(c) That the factor of population should be de-emphasized in distributing public revenues and projects in favour of the evaluation of inputs necessary to improve the human skills and resources as the nation's number one asset.

(iii) It is necessary to embark upon a vigorous information and public enlightenment programme on a nation wide basis to disabuse the minds of the public and direct their attention to the proper meaning and utility services of population census data in Nigeria.

(iv) That the National population Commission should not only pursue the issue of another census but should also initiate programmes for the effective take-off of a compulsory and universal system of registration of births and deaths, as well as periodic monitoring of growth rates of the population through demographic sample surveys.

(v) That the National Population Commission should encourage local experts through involvement in conferences, workshops, seminars and by providing necessary support for research to enrich our knowledge about Nigeria's population situation and prospects for the future thereby establishing a firm basis and an acceptable standard on National Population issues.

(vi) That population census exercise should be carefully planned and executed, and the results well disseminated having been subjected to vigorous statistical checks for accuracy, consistency and comparability.

(vii) That in development planning, the fact should be recognized that while economic development affects population change, such changes in population have a bearing on the direction and prospects of such development.

Welcome Address*

Professor S.O. Olayide, Vice–Chancellor, University of Ibadan.

Your Excellency, Chief Bola Ige, Governor of Oyo State, the Chairman, National Population Commission, Alhaji Abdurrahman Okene; Honourable Parliamentarians and Commissioners, distinguished guests, ladies and gentlemen.

It is my privilege to welcome you all to this epoch-making national conference on the *Philosophy of Population Census.* We here at Ibadan are delighted to play host to the National Population Commission on this occasion.

First, let me congratulate the Chairman, Alhaji Abdurrahman Okene, and his team of commissioners on their appointments to this rather sensitive area of public policy. I wish you all a successful tenure of office.

It is common knowledge that the issue of generating reliable and acceptable population census data has eluded every government effort in this country. The colonial population censuses were no more than guess estimates or at best 'partial' censuses, and authorities believe that population figures thus generated underrated the numerical strength of Nigeria. The post-independence population censuses on the other hand, have suffered from political manipulation, even during the military era. And now that politics is once again enthroned, the census question is bound to plague everybody's mind. Your Commission, therefore, has the very difficult task of providing a politically acceptable and statistically valid answer to this question: How many Nigerians?

By organizing this conference in which experts from our universities, policy makers, politicians and people with varying degrees of professional interest in the subject of population are to participate in discussing the census issue, your Commission has taken a step in the right direction. It is my belief that at the end of your deliberations there will emerge a technical blue print that will serve as the resource material for organizing, conducting analyzing and publicising reliable and acceptable population census data for this great country.

* *Presented on behalf of the Vice–Chancellor by Professor Ayo Banjo, Deputy Vice–Chancellor, University of Ibadan.*

Again, I welcome you all to the city of Ibadan and the premises of Nigeria's Premier University. It is also my privilege to make available to you the various facilities on this campus which may facilitate your conference activities and ensure your confort throughout your stay here. I do hope that those of you visiting Ibadan for the first time will find your stay very exciting. And to others who have been here before, I say welcome to the University once more.

I wish you very fruitful deliberations.

Opening Address

Chief Bola Ige, Governor of Oyo State

The Chairman, Honourable Commissioners and Special Advisers, Distinguished Senators and Legislators, The Vice–Chancellor, distinguished ladies and gentlemen,

It is my pleasure and privilege, on behalf of Mr President, Alhaji Shehu Shagari, and the Government of Oyo State of Nigeria, to welcome you the august visitors to this all time important conference on the Philosophy of Population Census. I am happy that this conference embraces people from all corners of the Federal Republic of Nigeria, from professional, technical and administrative sectors of our human resources, particularly when it involves our important legislators. Everybody in this country is aware of the delicate question of counting people, the problems and the disaffection which this exercise caused in the past, to such an extent that the census exercise has evoked concern from the general public as to how best it can be conducted without hitches and without causing disaffection.

I wish to congratulate the chairman and commissioners appointed for this delicate assignment. All members of the Commission have been appointed on their personal merit, and in the discharge of their duties they are not to be tied to the apron strings of anybody, but are to be seen discharging their functions for the whole country with transparent honesty and probity. I therefore want to congratulate the honourable chairman and his commissioners for having the foresight of holding this conference.

Quite rightly the first conference is expected to spell out the philosophy of population census, and the universities which have the burden of extending the frontiers of knowledge have been called upon to expatiate on the themes. It is my hope and belief that their contribution will clear a lot of obstacles arising from the previous census exercises and so pave the way for conducting a proper and successful census in the near future. I believe that if the general public knows exactly the aims and purpose of census-taking they will be more interested in giving accurate information which is so vital for the compilation of data.

Further, it is necessary to inundate the minds of the public servants employed to obtain accurate census data as to the serious purpose and objectives of the census exercise so that they may exhibit proper dedication and commitment.

I trust that the conference will be a landmark in the national effort to map out a purposeful census goal and pursue this with a sense of dedication. The Commission's task is by no means an easy one; but I think it has started very well. I wish the Commission God's guidance in its goal and aspiration of giving the nation a fitting, reputable and acceptable set of population census figures.

I thank you.

KEY–NOTE ADDRESS

Address by the Honourable Chairman of the National Population Commission, Alhaji Abdurrahman Okene

Mr President, Uncle Bola Ige, the Governor of Oyo State, Honourable Ministers & Commissioners, Distinguished Ladies and Gentlemen,

First and foremost, I will like to seize this opportunity to express the gratitude of my humble self and that of my Commission to all those who have submitted papers or are participating in the Seminar on how to conduct a successful population census. I have carefully gone through some earlier writings in the media in this country and invariably most of them conclude rightly that a population census is most desirable, and most feel that it must be conducted before or by 1983. Several suggestions have been offered, most prominent among them is the call to use the United Nations experts to conduct the next census. However, some voices were raised against this suggestion. These exchanges augur very well for our democratic development. My conviction is that Nigeria has as much to offer the world as she has to gain from the world. My main concern here is to discuss the census question. There is no gainsaying the fact that Nigeria needs an accurate and reliable census. The whole nation, I am sure, will agree on this issue. But from our past census history, it is obviously clear that a thorough home-work is necessary before embarking on this gigantic assignment. Without this thorough home-work, the present Commission will not only be courting a failure but will be plunging this nation into utter confusion and disaffection.

On the 8th of April, 1981, when the members of the National Population Commission were sworn in by Mr. President, I, as the Chairman, made a solemn pledge to Mr. President, his Council and, indeed, to this great nation that our assignment as contained in the constitution is an onerous one but we shall not fail the nation. Having made this pledge, it is incumbent on me and my Commission to ensure that this solemn promise is kept and that all our operations are crowned with success.

In order to ensure the much desired success in all our operations particularly the conduct of a nation-wide population census, my Commission has decided to carry out some basic reorganisation in the existing structure in order to ensure a poignant structure that will stand the test of time and which generates and enforces uncompromising loyalty and dedication to the nation. It will be an organisation that takes cognisance of as many interests as there are states or geo-political units in this country. In the past exercises, divided and sectional loyalty was the number one factor militating against a successful census in this country. To establish a firm base, census operation must be a continuous process from one exercise to another. In other words, as soon as a census is completed, analysed and documented, the planning of the next one begins. This continuity in planning has always been absent in our census history. The lack of coherent planning is our number two census problem. Allied to this is the absence of identification and specialisation in census subject-matters, including lack of adequate training of personnel in such identified areas. This is our difficulty number three. The failure in the past to divide this country into mutually accepted standard size, such as EAs to avoid overplanning in enumeration, was our census dilemma number four. I can continue on and on to recount our past census ills but such an exercise is mere boredom.

All I wish to prove is that in order to conduct a successful and reliable census in this country, adequate planning and thorough home-work are the necessary ingredients. Another important factor to consider in this whole census exercise is the collection of accurate and acceptable data. For example, data collected through sample surveys, or by routine administrative work, or through research studies etc., are invaluable only when they are accurate, objective and acceptable. Such data should be available for comparison purposes during post-enumeration checks. The absence of such data does not enable census experts to subject census results to all the tests, checks and balances in order to determine the level of reliability of such results. Therefore, my commission considers this a necessary ground-work and it is already doing a great deal in this direction. I consider it groping in the dark, if after a census, all we depend on, for our reliability tests, is the result of the Post-Enumeration Survey (PES); because the PES itself could be manipulated. Therefore, a data bank from other sources is necessary for comparing and testing census results.

I am a bit reluctant to speak about census politics. This is because, I know very well that census and politics are two inseparable elements. In this country, however, the inseparability has been over-done and emphasis has shifted from the vital area of building up all the inputs that are necessary to make our human resources an effective instrument of development. So that if in the course of this seminar we advocate or lay stress on de-emphasising tribal, religious and partisan politics, we are, in fact, depoliticising census. We all know how 'Nigeria's census exuberance' has made nonsense of our past census results because of wrong emphasis put on it. We must now play down and take away dirty politics of census. This, in the Nigerian context, is an important issue. It is so because the 'census rivalry' in this country, is not confined to the state level but has permeated down to the village level. In other words, it is now a common feature at the village level to hear villagers within the same political authority, arguing about census results and those with smaller figures promising to 'go to town' at the next census in order to increase their locality figures. This, to my mind, has compounded the census problems of this country. A lasting remedy of these set-backs must be found and firmly established both at the state and grass root levels, before we contemplate conducting a census that will not fail. I know some people may not agree with this suggestion. Their standpoint is that we should continue to try until we succeed; such people are no planners, they are dreamers and protagonists of the school of 'trial and error'. The Commission is resolved to plan adequately for the next census, because it is resolved that success in census must not edule this nation any more. The Commission is organising 'educational publicity' at all levels of our social life and we will make use of all available enlightenment devices. We will ensure that such enlightenment are carried out in the languages of the different areas. We will ensure that the present conception of the average Nigerian that census centres mainly on sharing of the 'national cake' is changed to determining how best to improve and develop our human resources as instrument for development within all the geographical areas of Nigeria. The thinking of the Commission on this vital issue has given birth to the present title of this Seminar, i.e., 'The Philosophy of Population Census in Nigeria'. We, at the Commission, believe that in conducting a census, we must have a philosophy, a mission, an objective, and a plan.

Our philosophy of census consists of six themes each carrying papers. which will be delivered during the week. Mere numbers or size of people do not mean much in the context of a Population Census, but, the information collected on each individual on the demographic, social, economic, cultural, religious characteristics when aggregated constitute invaluable repository of the socio-economic dynamics of our people from now on. This is what the Commission will strive to obtain from our census activities. The sheer number or size of our people within our confine or part thereof is of very limited value. But the aggregated data on everybody tell a moving story about the quality, spread, distribution, employment opportunities and various other potentials of the country when they are equated. Such assembled data in all their ramifications are the pre-requisite for planning and realistic development. They give us all we want about the demographic, social, cultural, traditional, religious, economic and personal life of our people. These will then aggregate the wealth of information for a carefully detailed and accurate analysis and their interpretation, in depth, will enable the country replan, reorder, redirect and reshape our social, cultural, traditional and economic life. This is the only way that Nigeria can achieve a measure of socio-economic take-off and project a true and worthy image of herself.

The information gathered in our census from now on will permeate the socio-economic labyrinth of our lives and this Commission will make it its singular duty to interpret these data to governments to enable them act swiftly in all areas of development. For instance, reduction to the barest minimum of infant mortality and incidence of death will be periscoped by data on mortality housing data obtained through census will show the adequacy or otherwise of housing provisions in the country; data on employment and unemployment will constitute a barometer for planning for employment opportunities; data on the educated unemployed people will tell how badly we need to educate for creativity. The study of data collected on the distribution of economic characteristics in the country will spur our governments and their appropriate agencies to develop our potentialities right across the length and breadth of this country. It will also dictate the type of encouragement the people need to enable them participate fully in the development of our economic well-being. Data on the quality of life will be closely studied and its improvement will be a major interest of the Commission so that ultimately the quality of our manpower will be greatly enhanced. Without a well developed manpower no country can meaningfully progress and become a power to be reckoned with in the comity of nations. To many, this might be regarded as the normal course of socio-economic life of any nation. To the extent that this trail in the past, has not been clearly spelt out by our predecessors, it is to this end that we are now resolved to make this new horizon become our philosophy and our priority objective from now on.

I will not like to talk about past censuses. It is a surprise to me that people talk glibly about over-enumeration. I do not want to be misunderstood, all I am saying is that any such over-enumeration must be proved conclusively. Past censuses might have contained a lot of mistakes. Reconciliability with other data, if available, could have brought out many of the irregularities. It is a fact of our census history that we had no other data to compare our census results with. It was therefore, a mere political decision to throw out any census results without any proven reasons for such an action. I am not trying to protect our predecessors in census. Objectivity is the watch-word of the intellectuals and so I am merely trying to be objective in my appraisal. The hue and cry about inflation of past census might be true, there are some indications of this. But they must be objectively proved. If there were no conclusive proofs then the hue and cry about inflation had no supportive or factual basis. Statistics have an interesting way of evening out. When you have over-enumeration you also have under-enumeration; both have a mathematical way of balancing up. In all the wranglings about the past censuses, this vital statistical issue was never considered. What people hammered on was the over-enumeration. This was never scientifically proved. I am not arguing that those who felt that our previous census were vitiated were wrong, nor am I saying that they were right, but I am merely noting that there was no conclusive proof(s) of this stand. From now on the Commission must strive for such scientific or objective stand in its handling of census issues.

From studies carried out about the conduct of past censuses we have noted many avoidable organisational inadequacies, some of which are:–

(i) Engagement of functionaries hastily collected together, one for each state, to take charge of the conduct and administration of census without any experience or exposure.
(ii) Lack of sufficient and experienced subject-matter specialists to organise the census.
(iii) Insufficient systematic and programmed training for census functionaries.
(iv) Sectional interest and sectional loyalty by census functionaries.
(v) Each State conducted its own census instead of a uniform census throughout the country.
(vi) Census publicity was usually inadequate and did not get down to the grassroots.
(vii) About 70% of Nigerians live in the rural areas and they are mostly illiterates, publicity among them was inadequate and not well planned and, therefore, cannot achieve the desired effects.
(viii) Enumerators and Supervisors, and indeed all functionaries, were not atuned to take census assignment as a national challenge that called for dedication, patriotism, thoroughness and singular honesty. Past experiences, therefore, were negative.
(ix) Census organisation and planning should take a period of not less than about 3 years, but in this country the maximum time alloted to past census planning was about 18 months, this was not adequate for efficient planning.
(x) Midstream, a *de facto* census dramatically turned to a *de jure* census. People supposed to be counted in their households were counted at random–at road blocks, market places, Churches, Mosques etc. This was a defeat of the correct principle.
(xi) Census logistics which is very important for success were always ill-planned and badly executed. There were some physical difficulties such as poor accessibility, poor communication and poor tran-

sportation, including lack of thorough study and planning. These lapses aggravated the difficulties a great deal. Unprogrammed logistics cannot be a precursor to successful census.

(xii) Respondents, in the past censuses, showed interest in the number registered and not in the detailed questions asked on each individual.

Shoddiness in answering census questions was a big source of poor results. These and many more were the problems to be removed in the future in order to have a hitch-free census in this country. My Commission, therefore, has decided that it is better to plan to remove these barriers before mounting the next census. I do know that there are very many voices in our political, academic, social and economic life calling for census before or in 1983–the census year. If we yield to these voices without removing all the noticeable impasses, we will again be courting failure. It is better to delay the census until the necessary homework is thoroughly done before embarking on this crucial exercise. I am happy that the Vice-President, Chief (Dr.) Alex Ekwueme, re-echoed this in his last monthly press briefing. A census that this nation will be proud of will be mounted as soon as all the necessary ground-work has been done.

Apart from correcting past errors in planning and organisation, the Commission has a number of important assignments to be carried out which are necessary ground-work for a successful census. The most important of these is the updating of the enumeration areas. The first scientific demarcation, as noted above, was carried out during the 1973 census, some imperfections were detected in this exercise. Many of the EAs were found to be too large. These imperfections must be corrected before the next census. A lot of development, you will agree, have taken place since 1973. Many parts of this country, particularly the urban areas, have developed fantastically. The EAs therefore, need updating. This updating exercise is a necessary prelude to a successful census. My Commission therefore is already planning for the immediate execution of this exercise. We already have a good experience in this field and hope to build on it. One of the legacies inherited from our predecessor is a very good cartographic division, which has an archive having maps and sketches of all the 120,000 enumeration areas into which this country was demarcated in 1973. We hope to improve on this very commendable achievement.

This address will not be complete if I do not mention, if only in passing, some of the programmes we envisage to carry out in the near future, i.e., this year. Apart from the series of demographic surveys which we have already embarked upon, in order to have data from various sources, the Commission intends to establish a nation-wide vital registration system. It is observed that there are pockets of such registration in some areas in the country. The uniformity and relevance of the data collected from a nation-wide vital registration system will enhance our demographic process. I do know that before such programme begins to yield results it will take many years. The Commission therefore, intends to mount a continuous vital registration sample survey as a check on the programme and at the same time, as a source of necessary data on births and deaths in the country. We envisage to involve the populace in this programme. We intend to make it the programme of the people by their involvement. In the organisation of this programme, there will be four tiers of execution and collection of data. These are:

(a) At Federal level--the Commision's Secretariat will organise the programme, prepare all the schedules and trainning materials, organise a series of workshops to train the trainers.
(b) At State level–Commission's State Offices under the Commissioner will
    (i) train the supervisors
    and registrars
    (ii) Organise and supervise many rounds of
    inspections.
    (iii) Collect data and forward them to headquarters.
(c) At Local Government level–we will intensify training on Co-ordination, Supervision and immediate retrieval of all data collected at community level.

(d) At Community/Village level–there will be training on efficient collection of data to be sent to Local Government headquarters.

At the Community level, the registrars, which will be employed part time and paid monthly honorarium, will be mostly:

(a) Headmasters/teachers of Schools.
(b) Pastors/Reverends of Churches.
(c) Imams of Mosques.
(d) Emirs/Obas/Obis, District, village and hamlet heads of Communities will be involved.

By this arrangement we feel the communities of this country will be fully involved in this exercise. In fact, we intend to introduce a 'Busy-body' system whereby reporting of events will be by many responsible people of the community in order to make official checking of events very easy.

Another programme which I will like to mention is the compilation of locality lists within each local government area. The main purpose of this exercise is to have fairly good knowledge of the localities within each Local Government Area of the country. Census functionaries and, indeed, interested persons, should be familiar with where the people are. This exercise has been going on for sometime, and, in fact, it has been completed in respect of some areas in the states. After its completion for all states, it will be published as a booklet showing a detailed summary.

Finally, Ladies and Gentlemen, the work with which we are saddled is not by any means an easy one. I wish to assure the country, that we shall do our very best to see that the next census is a huge success, free from wrangling and complaints, so that the Commission itself becomes an international repository of population data of a reputable and respectable standard and be so acknowledged by the world at large.

Thank you.

SESSION I

The Philosophy of Population Census

THE PHILOSOPHY OF CENSUS IN NIGERIA

F.J. Falodun

Introduction

MANY scholars have written on the unfortunate history of censuses in this country. Nigeria has recorded as many as fourteen censuses but none of them could be considered accurate. The pre-independence censuses, particularly the earlier ones, were beset by many problems, such as inaccessibility, lack of communicational and transportational facilities and the unco-operative attitude of the people. The net effect of these factors was a considerable underenumeration of the population. The post-independence census, on the other hand, were beset by these factors to a lesser degree but they were profoundly plagued by political influences which resulted in an overenumeration of the population—a phenomenon that appears to be unique to Nigeria. Under these circumstances it is crystal clear that a serious rethinking on the conduct of, and attitude towards, census in this country is absolutely necessary. Without divorcing ourselves from the old ways and evolving a new approach, any future census taken in this country have a very high probability of resulting in failures as usual. Therefore, apart from putting the house in order, a serious homework must be undertaken.

A new approach to census taking must be devised inorder to ensure a reliable result in the future. Therefore after a thorough study of the census situation in this country, the Commission has come up with a positive approach to census, an intense belief and commitment to the cause of census operation which must not fail. This may be referred to as a positive philosophy or simply a philosophy of assurance in future census undertakings.

Intentions of the Commission

The greatest asset of any nation is its population. It is the population that will work to develop the wealth of the nation. Therefore the quality of this priceless gem becomes a paramount pre-occupation. Its development in all fields of endeavour becomes a desideratum, so as to be able to exploit and develop to the fullest, our social, cultural, political and economic potentials. The main aim of the Commission therefore, is not only to reverse in the very near future, the unfortunate situation in our census history, but also to create a proud, respectable and reputable place for this nation in our determination towards rapid collection, compilation and analysis of demographic, social and economic data on a systematic and scientific basis. This, indeed is the crux of our new philosophy.

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* *F. J. Falodun is the Director, National Population Commission, Lagos.*

The Commission, must, of necessity be able to give the number of people within our confines. It however, realises the limited utility of such absolute number. It is therefore interested in collecting all manner of data about each and every person in the country. The Commission intends to use the mass of data collected to assist planners in reshaping the strategies through which development objectives are being pursued. The main interest of the Commission in this regard centres on the development of the human resources in order to enhance creativity and consequently eliminate socio-economic inertia. It will suggest ways of reducing or reversing wide-spread poverty, unemployment etc. in all sectors of the economy. It will advocate that serious measures be taken to remove certain noticeable features in our society, such as frustration, disillusionment, and social pathologies. From its wealth of information it will advise the governments on:

(i) the establishment of a systematic approach to development planning and mass mobilization for productivity;

(ii) mass awareness of the people of their roles in our development efforts and;

(iii) the proper handling of the human element in our planning and implementation process.

Furthermore, the Commission's data collection efforts will have in view, the improvement of or the elimination of various militating factors in the different fields of endeavour, such as health, education, agriculture etc. For instance, poor housing and living conditions, lack of proper food, inadequate health care, low level of social engineering etc. are some of the factors that militate against the quality of life of our population. The Commission intends to look into how the data collected will bring out vividly problems associated with these factors and thereafter seek expert advice on how best to remove them or ameliorate their effects in order to ensure better quality of its population.

One thing is clear from the above expose, and that is, the determination to improve the quality of life of our population and in turn to ensure rapid development in all spheres of the nation's socio-economic activities. A better quality of population, logically will ensure a more creative, productive and hard working people. In order to achieve all these, the Commission must evolve a well planned and articulated policy which will take into consideration the Commission's demographic programmes. The bed-rock of this policy will be a high quality of population, strong and united in one common goal i.e. improved socio-economic well-being which will ensure a healthy and contented growth throughout the nation.

In sum, the Commission's philosophy of census has been succinctly spelt out by its honourable chairman as follows:

(i) to enlighten the general public on the meaning and utility services which an accurate census plays both in the growth, development of the people and the country's human and other material and mineral resources.
(ii) to depoliticize the issues of census.
(iii) to re-direct the thinking of the people towards objective achievement through census.
(iv) to ensure that statistics compiled are capable of highlighting problems and hopeful areas which affect the rate of growth of people in the country in all their ramifications.
(v) to subject the statistics to accurate analysis and interpretation in order to provide for the nation dependable guidelines on the growth of people and the country's economy.
(vi) to eventually arrive at a stable condition whereby through re-orientation of thinking, education and objective planning, the human resources become an asset and an effective instrument for exploiting and enhancing the growth of economic resources so that the benefits accruing from such exploitation and growth are re-directed towards improving the quality of life of the very human resources.

Problems Militating Against Accurate Censuses

There were many problems that beset our attempts in the conduct of censuses in the past. Some of these (mainly physical), have been enumerated above. Apart from these physical problems, many others were man-made and reared their heads during the planning of the censuses. Some of them arose because of our heterogeneity and huge size. The honourable chairman mentioned some of these problems in his opening address. I wish to also enumerate them. They are

Organizational Problems:

(i) engagement of state functionaries hastily collected together as state census officers to take charge of the conduct and administration of census without relevant experience.
(ii) lack of sufficient and experienced subject-matter specialists to organize the census;
(iii) insufficient systematic and programmed training for different cadres of census functionaries;
(iv) sectional interests and loyalities by census functionaries;
(v) each state conducting its own census instead of a uniform census operation throughout the country;
(vi) census publicity and enlightenment were usually inadequate and did not get down to the grass roots;
(vii) enumerators and supervisors, and indeed, all functionaries, were not

atuned to taking census assignment as a national challenge that called for dedication, patriotism, thoroughness and singular honesty;

(viii) census organisation and planning should take a period of not less than about three years, but in this country, the maximum time alloted to past census planning was about eighteen months; this was not adequate for efficient census planning.

(ix) midstream a *de facto* census dramatically turned to a *de jure* census. People supposed to be counted in their households were counted at random–at road blocks, market places, churches, mosques etc; this was a defeat of the original principle.

(x) census logistics, which are very important for success, were always ill planned and executed.

Physical Problems

(i) inaccessibility.
(ii) lack of communication and transportational facilities.
(iii) lack of office and storage facilities.

Technical Problems

(i) enumeration areas not being properly delineated;
(ii) non-availability of up-to-date base maps;
(iii) poor training of enumerators and supervisors;
(iv) census questionnaires are not simple and clear;
(v) no clear cut understanding of the importance of enumeration in households;
(vi) lack of the right calibre of enumerators and supervisors (educationally) required for census enumeration;
(vii) difficulties in the retrival of completed census questionnaries.

Attitudinal Problems

(i) politizing of census operation;
(ii) respondents' lack of interest in answering questions accurately;
(iii) respondents evasiveness of questions because of traditional beliefs and mores;
(iv) overt interest in supplying answers to questions on number of people in house-holds, resulting in over-counting.
(v) lack of patriotism and sense of mission on the part of functionaries, particularly field-workers;
(vi) divided loyalties of functionaries.

The above catalogue of problems are not exhaustive but surely shows the enormity of the difficulties to be surmounted before a reliable and accurate census can be assured.

Commission's Evolved Solutions

After a thorough review of past census and the identification of the myriad of problems which vitiated the past results, the Commission has come up with a number of positive suggestions on how to solve these problems. The Commission's first preoccupation is to re-educate and re-orientate the people of this country from the top to the grassroots about the principles and purposes of census taking. The most important problem to be solved is the politics of census. The census operation must be seen from what it is: a purely statistical exercise. It is after its successful completion that the results could be used for social, economic and political planning.

The mode of engaging functionaries for the census, at all levels, needs to be reviewed. In the past the approach employed in getting functionaries for census operations was by mobilizing both federal and state staff. Then majority of them were state personnel both at management and operational levels. Census managers at the state level were state senior administrative staff who, in turn, were responsible for the recruitment of the different grades of operatives in the state. Those recruited, particularly for the field-work, in most cases, were civil servants. Naturally employees have their loyalty to their employers. Since the relationship of the functionaries recruited or loaned from the states' civil service to the census management was not strictly that of employees to the employer, the loyalty of these state functionaries naturally went to the state. So in all their operations their first consideration was for the state and not the country as a whole. These functionaries therefore had to obey the directives of the state. In fact, by the arrangement each state head of government had some supervising influence since he had to direct the release of his officers for the census exercise. The short of this, was that in the course of gathering census data the interest of the state became paramount. Hence, in the attempt to see that everybody in the state was counted, they resorted to road blocking and counting in market places, thus, increasing the probability of inflation. In future, majority of such functionaries, if not all; will be directly employed by the Commission. In this way, their loyalty will be, first and foremost, to the Commission. The census management, that is the Commission could "hire and fire". In past undertakings this was not the case. The importance of this is that these functionaries will take their assignment more seriously and will be interested to be associated with a successful census operation. This undoubtedly will reduce considerably the shoddinness observed in the past census field-work.

In the past, the main interest in the census was obtaining the absolute number of people in the country. This has been associated with the "sharing of the national cake", distribution of seats in parliament, and the distribution of various other amenities. Absolute population figures obtained from the census exercise were thus directly related to political and economic power. Over the years, this generated a very unwholesome rilvary among the states and the different sub-units within them. The Commission will play down on this aspect and place more emphasis on the characteristics of the individuals enumerated. This is an aspect of the census that is very vital to the planners.

Census Publicity and Enlightenment

In the past, the publicity of the census programme was left primarily in the hands of a committee made up of top state officers from different ministries. The control of such an amorphous group was difficult. The sentiment behind this type of arrangement, namely federalism in census operation, was a bane to success. It robbed the census of a smooth and uniform operation throughtout the country. Census publicity should be geared towards the local environment. The content or input must be the same but the presentation will naturally vary depending on the environment. In order to achieve this, the people involved in census publicity and enlightenment must be directly responsible to the Commission. It must be ensured that they are people who will carry out all laid-down directives without colour or variation. This way the Commission will be certain that its functionaries carry out its public campaigns uniformly throughout the country.

Census publicity in the urban areas will stress among other things, that travelling to one's home base to be counted (census migration) is to defeat one major purpose of the census. The people must be throughly schooled to shed this tendency. On the other hand, the publicity in the rural areas must be intensive and aimed at educating the people to enumerate only those in their households and not include sons and daughters abroad. It must stress the disadvantages to the community of loading the results for the area. The enlightenment should stress the planning advantages of giving accurate figures and the disadvantages of the playing politics with census operation

Intensive Training for Demographers and Other Professional

A continuous training programme for census professionals should be seriously undertaken. If this is carried out the officers will be in a position to remove technical bottlenecks. It must be stressed that there is no alternative to the proper and adequate training of census personnel at all levels. It is also very useful for selected officers to visit other countries in order to interact with their professional colleagues and exchange ideas. Such visits will also afford them the opportunity to study in situ the countries' census operations and achievements. Some of the methodologies acquired will be adapted to suit our local setting. There should be cross-fertilization of ideas among local intellectuals particularly the professional and academic demographers and those in allied disciplines.

Plans Towards a successful census

The Commission, since its inauguration, has embarked on many projects as a prelude to a successful census.
They are:

(a) *Ground–work*
  (i) compilation of locality lists throughout the federation
  (ii) cartographic-work, drawing of enumeration area maps on local government levels
  (iii) demographic sample surveys
  (iv) fertility surveys

(b) *Immediate Programmes*
  (i) up-dating of enumeration areas
  (ii) establishing a nation-wide vital registration system.

CONCLUSION

Many of the problems militating against a successful census in this country have been identified. Also a new and positive approach to the conduct of census and, indeed, to the collection of demographic and allied data has been espoused as a philosophy which must be embarked upon. The Commission will not stop at data gathering but will interpret its data and suggest how best to use them maximally to enhance the socio-economic well-being of our people. It will also look into the factors which militate against the quality of life of the population and suggest ways of removing these problems in order to ensure a better quality of life of the population so as to meaningfully exploit, to the fullest, the social, economic and political potentials of the country, enhance, our developmental efforts and reduce the incidence of hunger, illiteracy, poverty, diseases and all the social ills that plague this great country.

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SESSION II

The Meaning and Utility Services of Population Census

Utilization of Population Data for Planning Purposes

I. O. Orubuloye

Introduction

THE apparent lack of population census data in sufficient quantity and quality has been generally accepted as one of the major factors militating against efficient planning and administration of development plans in Nigeria.

At the preparation of the 1946–56 Ten-year Plan of Development and Welfare for Nigeria, the officers in-charge of the preparation of the plan document observed that in addition to the problem of shortage of capital and skilled manpower, the general lack of necessary data to guide the drawing of plan was a major handicap.

To this end the colonial office recommended that:

> Statistical work will also be necessary in order to arrive ultimately at a proper mathematical foundation on which to build future development. It is, therefore, intended that a statistical branch be set up, which amongst other things, will arrange for a census of the whole country in the year 1981[1]

Since Nigeria attained Independence in 1960, four National Development Plans have been drawn up, out of which three have been executed. All the development plans had reiterated the deplorable state of statistical data in Nigeria. Similarly, the problem of availability of accurate, reliable and timely statistical data in the planning, execution and appraisal of development plans and projects have attracted the attention of many scholars and organizations in recent years.

In 1969, the Economic Commission for Africa stressing the importance of population as a factor in national planned development noted that:

> The population of a country is as much an agent as the beneficiary of any planned economic and social development undertaken. In any development plan therefore, the population whose advancement is planned for must be given due attention and the population factor made an integral part of the planning process, and not merely an exogenous factor to be taken account of [2]

In a similar vein one of the Working Groups in a recent National Workshop on Planning Strategy for the 1980's in Nigeria observed that:

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* **Dr. I. O. Orubuloye is a researcher at the Nigerian Institute of Social and Economic, Research, Ibadan.**

> No realistic planning could take place without a reliable data base. It emphasized the need to know how many people there are in Nigeria, how many villages, how many households, acreage of arable land and so on, so that planning for the nation can be based on adequate information about the demand for goods and services and the supplies that are likely to be available to meet that demand.[3]

Against this background, the working group recommended that:

(1) Basic data in respect of all resources whether they be human or material should be obtained. In respect of human resources, detailed population figures are needed for long-term planning.

(2) Basic data in human resources should provide detailed information on the available manpower in the various fields of specialization.

Similar recommendations are contained in many aspects of the report of the workshop. The Panel on Social Development, for example recommended among other things that, each local government council in Nigeria be assisted to collect the following population data before 1980:

(i) population of children of school going age.
(ii) population of women of child-bearing age.
(iii) population of taxable adults.
(iv) population of eligible voters.
(v) occupation of adult population.
(vi) vital statistics. [4]

The above demonstrates the increasing attention being paid to the need for population data in the planning process in Nigeria today.

The purpose of this paper is to examine the types of population data which are used in development planning; the current status of such data in Nigeria, and also how best to develop the machinery for the collection and effective utilization of these data.

Population Census Data for Development Planning

The relationship beween population and development planning has occupied an important position since the inception of population studies. At the outset, the relationship was seen in terms of maintaining a balance between population and the means of subsistence, such as food. The general concern in most of the developing countries today seems to be that of maintaining a comfortable balance between population and the basic necessities of a modern society. These include among other things: education, health, food, employment, and housing.

Brass enumerated two sides in which population components enters into the planning process:

(1) For consumers of goods and services: Children for education, the sick

for hospitals and clinics etc.

(2) For the supply of manpower: doctors, teachers, demographers etc [5]

The basic population data required in the planning process is therefore a general profile of the main characteristic of the population. This includes the size, spatial distribution, age, sex and employment situation. Data on micro variables such as education, health, agriculture, housing, transportation and human resources are aslo relevant in the planning process. Such detailed population statistics by sub-groups and area are necessary to determine the current situation from which development is expected to proceed, as well as determination of future development potentials.

Sources of Population Data for Planning

Population data for development Planning can be collected through periodic census, vital registration, sample surveys, population registers and non-traditional sources.

Population Censuses:

The census is the main source of population statistics in many countries. Censuses are conducted by obtaining information about every inhabitant of a particular area. It is a sort of social photograph of certain conditions of a population at a given moment. These conditions are expressible in numbers.

The basic statistics normally obtained in a complete census are sex and age, residential status, birth place, employment, education, tribe, religion and martital status.

These statistics vary from place to place and from census to census. Although complete population censuses are the simplest and most convenient means of collecting the more detailed and extensive information needed for development planning, the history of population censuses in Nigeria has indicated that this is usually not the case.

Vital Registration

Vital registration is a continuous record of the incidence of births, deaths, marriages and divorces. The system records and compiles the incidence of these events at or near their times of occurence.

In many developing countries, vital statistics are non-existent. In countries where they exist, the data are not available in sufficient quantity and quality that can be used for any reliable planning.

Like the census, the history of vital registration in Nigeria is not a happy one. Although the registration of vital events was initiated in Lagos by 1867, with the intention of making it national. To date, the exercise is carried out in limited centres. Even in these centres one cannot be sure of the extent of coverage and the degrees of the reliability of the available information.

Sample Surveys

Sample surveys are perhaps the most powerful means of obtaining more accurate, detailed, and complex statistics for the country, as well as for any of the major sub-divisions. Sample surveys or demographic inquiries usually contain information on the following:

current age distribution by age and sex
current births by age of mother
current deaths by age and sex
total number of children ever-born and surviving to all women by their current age
information on education, occupation, income, religion, birth place and migration status are always included in demographic inquiries.

Despite the deficiencies and the limitations of the data usually obtained from demographic inquiries, data of this type have contributed immensely to our knowledge of the population situation in Nigeria.

Population Registers

THE population register is a government data collection system in which the demographic and socio-economic characteristics of all or part of the population are continously recorded. Major events such as births, deaths, marriages and moves are often recorded in population registers.

The maintenance of population registers requires a lot of resources and a reasonably accurate address system and a literate population. Therefore, the source is usually employed by the advanced countries. Denmark, Sweden and Israel are among the countries that maintain universal registers for demographic purposes.[6]

Other sources

The non-traditional sources include parish registers, baptismal records and administrative data.

Utilization of Population Data for Planning Purposes

Use of Census Data

Census statistics are the basic data required for planning, administrative and research purposes. As indicated in the first part of this section, there are two ways in which population components enter into the planning process: for the distribution of goods and services and for the supply of the required manpower to administer them. Therefore, population data are needed by the government for planning for the services provided for the people. These services include among other things: education, health, housing, employment.

Educational Planning

The growth in the educational services of a nation is an important aspect of development since the quality of available manpower in a country depends on the quality of the educational system. Nigeria has established some ambitious educational goals since independence and lack of accurate population data for planning may limit the country's ability in achieving these goals. In educational planning the population in the school-going ages by age and sex must be available. Such information can be utilized as indicated below:

Classification		Possible Utilization
(i)	Population aged 1 – 2 years	Development of nursery schools and day care centres
(ii)	Population aged 3 – 5 years	Development of kindergertens; forecasting primary schools age population.
(iii)	Population aged 6 – 11 years	Development of primary school; forcasting secondary school age population.
(iv)	Population aged 12 – 17 years	Development of secondary school
(v)	Population aged 18 – 24 years	Development of tertiary education

Health Planning

The provision of adequate health services is regarded as an essential component of the services required to enhance the quality of life of the individual citizens and the overall development of the nation. To plan for the number of persons per doctor, nurse and paramedical personnel, the number of persons per hospital bed, requires population data on the size, age and sex distribution of the population in the country. Health needs of the population tend to differ according to their age and sex. For example, the knowledge of the size of the population aged 0 will enable the government to forecast the magnitude of immunization programme for the young ones, forecast child-care aid and family allowance to mothers, while the population of women aged 15–49 will enable the planners to estimate the population of child bearing age, as well as the type of health services that will be needed by this group.

Housing

Shelter is one of the absolute essentials for the physical survival of man. The demand for housing depends largely on the size of the population, age and sex distribution, family size and population distribution (rural–ruban classification) and the mobility of the population.

Labour Supply, Manpower and Employment Planning

The supply of labour in any given population depends upon the size of the population, the fertility level, its age and sex structure and the labour force participation rates. The size of the population between 18 and 64 years of age, for example, will enable the planners to forecast the country's labour resources. For the government to plan for the provision of adequate employment for persons in the labour force, it is essential to know the size of the labour force, the rate at which new persons are entering and leaving the labour force, as well as the characteristics of the labour force. The size of the future labour force depends primarily upon the projected population and labour force participation rates. Reliable population census data will enable planners to make necessary predictions about future employment situations in the country.

In addition to the above, census data are required for agricultural planning, regional planning, for monitoring the relationship between population and the development process, for revenue allocation and the allocation of parliamentary seats.

Use of Vital Registration Records

Vital registration records and statistics can be used as indicated below:

(1) to provide additional data, independent of census on measures of fertility and mortality for both the entire nation and for small geographical areas for study of trends and patterns in fertility and mortality.
(2) can be used as a check on census enumeration, particularly at the infant and young age range where under-enumeration is most common.
(3) the sex ratio at birth provides valuable pieces of information that can be used in population projections.
(4) provides legal and documentary evidence for purposes of certification and determination of age, civil status, rights and claims.
(5) use for epidemiological studies of morbidity and the planning of health services and programmes.

The history of sample surveys is relatively recent in Nigeria. One of the earliest sample surveys ever carried-out in Nigeria was the medical census held in certain parts of Nigeria in 1931. Although the study was not purely a demographic one, information was collected on fertility and mortality. Thereafter, numerous sample surveys were carried-out in Nigeria by various organizations and individual researchers.

Sample surveys can be used in a number of ways which include: checking the accuracy of census figures, the estimation of demographic parameters (fertility, mortality and migration); estimating the total population of a country and its spatial distribution; and estimating the number of demographic components of the existing population.

Post-enumeration survey is now regarded as one of the most important survey techniques for checking the accuracy of census returns. This survey is usually conducted after the main population census and many countries of the world where censuses are conducted regularly have regarded it as an important part of census operations.

In countries where census enumeration are problematic, sample surveys can be conducted to generate the necessary demographic parameters that may be used to estimate the population. The rate of growth of 2.5 percent currently being used to estimate the Nigerian population was derived from the 1965–66 Rural Demographic Sample Survey. The recently concluded National Demographic Sample Survey may provide new growth rates that can be used to estimate the Nigerian population when the figures are finally released by the National Population Bureau.

Other sources of population data such as the population registers can be used for a wide range of administrative and statistical purposes. The administrative purpose include: identification of persons in control of electroral rolls, selection for military service (particularly those between the ages of 18 and 35) and the preparation of the tax list. A wide range of statistics on the size, structure, composition and movement of the population can be derived from population registers. Such registers can also serve as valuable sources of statistics on social security, health, education, family income, housing and taxation.

The above represents a general profile of the possible utilization of population data in the planning process. It is regretable that information on population data, particularly census data, are not available in sufficient quantity and quality in Nigeria. This apparent lack of reliable and adequate information on the size, structure and composition of the population of the country is one of the major handicaps in the planning and implementation of many of the projects conceived under the various development plans already drawn by the government.

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The Significance and Problems of Census–Taking in Nigeria

A.O. Okore

1. Introduction

THE theoretical baseline of our analysis rests largely on the working definition of census as "the process of collecting, compiling, and publishing demographic, social and economic data about the population of a defined territory at a specified time" (Pollard, et. al., 1974: 3). As Brass rightly pointed out, a national census constitutes a vital and comprehensive means of attaining a profile of the main characteristics of the population in terms of its size, geographical distribution, sex and age composition, employment, and so on. Such a profile is imperative for adequate "investigation or planning of community services (agricultural, medical or educational) of man-power, employment and skills, or of economic development and social welfare. It is essential for the assessment of human resources and needs" (Brass, 1968:34)

The observations by Brass reinforce the urgent need for reliable data for socio-economic planning. This is true for both the developing and the developed economies. Economic development and growth require planning (Stolper, 1970: 329). Planning, on the other hand, becomes meaningful if it is based on statistical hypotheses or evidence which are partially derivable from well-planned and considerably accurate censuses. It is only when we have, at our disposal, reliable information or data that we can institute meaningful planning. Good planning should generate policies that should ensure the welfare of the population within a particular geographical area. But planning without facts or without reliable facts leaves the development efforts even more confused and may even lead to a revolution of rising frustration amongst the populace. The disastrous effect of planning without adequate and reliable facts may be exemplified with an aspect of educational planning in Nigeria.

2. Examples of Failures in Plan Execution Attributable to Planning Without Facts

During the early stages of decolonization, the Macpherson Constitution of 1954 transferred considerable power from the central to the regional governments and thrust the regional governments with the responsibility of formulating and implementing economic policy. One of the major areas in which the governments of the Eastern and Western Regions were strongly committed was the development of primary education. The original goal was to attain Universal Free Primary Education with a view to providing a launching pad for man-power development (Berry and Leidholm, 1970: 79–80). The Western and Eastern Regions launched the Universal Primary Education (UPE) scheme in 1955 and 1957 respectively. However, these regions later reduced the original goal of attaining universal free primary education as a result of the difficulties of financing and staffing of the enlarged number of schools. In 1958 the Eastern Region was forced by acute financial strains to reintroduce fees in the higher classes of primary schools (after only one year of the free primary education experiment) (Sokolski, 1965: 71). The failure of the UPE scheme is definitely explicable in terms of the fact that the projected number of children of school age (six-year olds) far exceeded expectations. This, in turn, was due to the unreliable and poor data base, upon which the projections were made. The end result was an acute shortage of facilities, trained teachers and finance.

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* Dr. Okore lecture in the Department of Economics at the University of Nigeria, Nsukka.

Similar experiences were replicated at the federal level. The Federal Government aimed at introducing Free Compulsory Primary Education during the 1975–80 National Development Plan period. Compulsory education was to start in September 1979 for the six-year olds. The cost (both capital and recurrent) of the scheme, which included the establishment of Grade II teacher-training colleges and the training of teachers to staff the primary schools, was staggering (Nduka, 1976: 100–5). The government had to contend with the problem of catering for myriads of children of school age in excess of the numbers originally planned for. The compulsory element in the plan had to be dropped. As of now the entire programme appears to have ended in disarray. One of the major reasons for these failures hinges on the lack of reliable and adequate data at the planning stage.

3. Useful Census Information for Socio-Economic Development

As we pointed out earlier, demographic, social and economic data can be obtained through well-planned and implemented censuses. Useful information derivable from censuses for planning purposes includes the following:

A. *Population Characteristics:*

- age and sex distribution
- marital status
- marriages
- divorces
- number of families by type[1]
- geographic distribution of the population
- fertility and mortality
- birth place and place of residence
- internal migration.

B. *Education:*

- level of schooling attained
- level of qualification obtained
- student/pupil population by type of school.

C. *Working Life:*

- major activity of population aged 15 years and over
- occupation groups
- employment status (full/part-time)[2]

D. *Housing:*

- type of dwelling occupied[3]
- materials of outer walls of occupied dwellings
- number of persons per room
- facilities enjoyed in occupied dwellings (e.g. electricity/gas, flush toilet, bathroom (shared?), kitchen (shared?).

These and other kinds of information are necessary for administrators and planners if they are to achieve goals of socio-economic expansion and welfare through planned programmes.

4. Problems of Nigerian Census-Taking

This section briefly examines the problems of past censuses in Nigeria, as well as some of the problems that are likely to lead to a distortion of census results if they are allowed to come into play in any future census exercise. These problems will be classified into the following headings:

Logistic and Planning Problems

Past experience in the 1931 and 1952/53 censuses indicate the prevalence of opposition to the censuses in parts of Eastern Nigeria and Midwest (Okonjo, 1968: 79, 81). Such opposition was due to ignorance amongst the people about the essence of the census-taking exercise. It was thought to be linked with taxation. Although this problem may well be a thing of the past, it is, however, important that we do not assume away the possibility of its replication in some parts of contemporary Nigeria. The enlightenment campaigns that should necessarily precede the census in Nigeria should try to disabuse people's minds about the idea of conducting censuses for tax or other financial purposes by government.

Another important consideration relates to the calibre of census staff and enumerators. Here again, in contemporary Nigeria we have a wealth of school teachers who could be mobilized as enumerators. Students and staff of polytechnics, colleges of education and universities could also be effectively used as enumerators and supervisors. Successful mobilization of these groups would depend largely on how much the public enlightenment campaigns have successfully appealed to reason and generated a sprit of commitment amongst the elite. If this can be achieved, then we shall be fairly sure about the calibre of census staff, and hence forestall a repeat performance of the 1952/53 situation in which school children were used as enumerators in Northern Nigeria (Okonjo, 1968: 81).

A very serious planning problem relates to the issue of precensus delineation of all nooks and corners of the country. A thorough work on this should forestall the situation (rampant in the 1952/53 and 1962 censuses, and even in the 1972/73 census that was cancelled) in which new villages were suddenly discovered during the census period. (See Udo, 1968: 101, Okonjo, 1968: 81). One way of tackling the problem is through good aerial photographing of all parts of the Nigerian territory supplemented with a thorough listing of all villages and towns prior to the census. Here again we can employ the services of students on vacation who would move into various parts of the country and, with the aid of the available aerial photographs and the assistance of local chiefs and councillors, list all villages and hamlets.

The problem of covering normads and itinerant farm labourers should also be given attention. It has been pointed out that one of the causes of misunderstanding in past censuses in Nigeria relates to charges and countercharges regarding over-or under-enumeration in parts of the country. The point should, however, be made that, depending on the timing of two successive censuses, there could be genuine changes in recorded population figures attributable to temporary population movements. Take an example of the case of itinerant farm labourers. Suppose that one census was taken during the peak farming season, it is likely that those districts which contain large numbers of itinerant farm-labourers who travel to other districts to work for pay would record a population figure that does not reflect their true population size. Suppose that the next census is taken during an off-peak farming season when the labourers are in their home-villages, then the recorded population figures may be increased partly as a result of the presence of this group of labourers and partly as a result of the process of natural increase and even in-migration (i.e. people returning to their villages to be enumerated). Here, the issue is that of timing.

Our leaders should understand why population figures could be less in one census period and more in another in order not to generate the type of heat that characterized post-census discussions in the past.[4] The timing is also important in regard to the normadic group in terms of where and when they are more likely to stay during particular periods of the year. Timing is equally important in regard to the riverine areas which are often even more inaccessible during the rainy season.

Finally, the whole question of people moving to their home-villages should be discouraged. It could easily engender double-counting. In the past, the massive movement to home-villages was usually in response to the clarion calls of the leadership who saw population counts and the resultant figures in the light of the political advantages that would accrue from large and inflated numbers. Public enlightenment campaigns and a reorientation amongst the leadership regarding the real essence of censuses might generate the right attitudes amongst Nigerians towards census-taking programmes. The political element should be de-emphasized in census-taking exercises.

Socio-political problems

The idea of politicising of census exercises in Nigeria has often been traced to the ethnic orientation of Nigeria's political structure and the so-called pluralism of our society in the form of ethnic, linguistic and religious divisions (Stolper, 1970: 335). These conditions find easy outlets and are given eloquent expression in situations whereby the allocation of parliamentary representation and seats, the drawing up of the electoral register and other election matters are presented as the real essence of census-taking. The dominant orientation is thus, that the chances of winning elections rest largely on size of population rather than on party manifestos and past records of contesting parties. This is even more problematic since parties are organized largely along ethnic lines. (See Udo, 1968, pp 98–99.)

It is equally pertinent to point out that we must endeavour to exclude from census exercises the currently popular politico-economic strategies of ensuring' geographical spread' and 'national character'. The pursuit of these strategies again reinforces and underlines the ethnic character of our body politic and projects the spirit of ethnic and state loyalties rather than national loyalty. People tend to think more in terms of what government has or has not done for their own state vis-a-vis other states. This leads to rivalries and controversy, which are unhealthy conditions for census-taking and should be eliminated.

Closely related to this is the idea of sharing the 'national cake' – a factor that is very prominently reflected in the revenue allocation exercise. If allocation is linked with size of population, then invariably there would be the temptation for various groups to be encouraged by their leaders to inflate their population sizes. In planning censuses, therefore, serious thought must be given to the maintenance of a delicate balance between political and economic considerations. Censuses are important both politically and economically but they should not be seen mainly as another instrument through which political points can be scored.

Topographical Problems

Since riverine areas such as Eket, Brass, Degema, Ogoni, Opobo can only be reached by boat, it is very important that adequate arrangements be made for river crafts to carry the field-workers to all the settlements and villages. Anything short of this would tantamount to incomplete enumeration.

5. Conclusion and Suggestions

Nigeria has had a fairly long history of census-taking dating back to 1866. Censuses taken before 1911 were however restricted to Lagos. Although after 1911 they were extended to cover the whole country, the figures obtained were largely based on estimates and guesses and were to serve the interest of the colonialists (Okonjo, 1968:78). The 1962 and 1963 censuses were the first real attempts to achieve a complete head-count of the entire country. As we have shown in the preceding section, these past attempts were however replete with problems. Our experience in census-taking in Nigeria for purposes of achieving an accurate count of number for socio-economic planning and development is therefore relatively recent. What is required is nothing short of complete and accurate enumeration. The achievement of this goal depends largely on how thoroughly we are able to handle the design, organization and fieldwork of the census. It also depends on the extent to which the leaders and the led are committed to achieving accurate and complete enumeration. This would require a national publicity campaign starting from the politicians to the electrorate. For purposes of the campaign the Population Commission should mobilize the services of their staff, and the staff of allied institutions including the Federal Office of Statistics, as well as demographers, sociologists, anthropologists, geographers to invade all the segments of Nigerian society to educate the people on the real essence of censuses. The involvement of politicians, in the past, in the public enlightenment campaigns made room for even greater distortion of census figures. Udo (1968: 100), for instance, noted that in his opening of the campaign for the 1962 census at Enugu, the then Premier of Eastern Nigeria noted that "future legislative representation, siting of industries, and provision of amenities" would be based on figures derived from the census. Such statements not only have a political undertone, but could also surreptitiously incite people into inflating their figures in order to maximize their chances of attaining the benefits so enumerated. There is need, therefore, for even the politicians to be educated about the need for accurate, complete and undistorted enumeration. There should be a reorientation of the Nigerian populace from top to bottom.

In planning for a census, the Population Commission should also enlist the services of experts in and out of Nigeria for catographic work, aerial photography, the drawing up of calendars of events and other such technical aspects of the pre-census preparations. The Commission should also enlist the services of teachers, and students in institutions of higher learning for the listing of villages, hamlets, settlements, towns and cities throughout the country. These students should be supervised by the staff of the Commission and staff enlisted from the institutions of higher learning (demographers, geographers, sociologists, anthropologists). Indeed the services of this group could also be enlisted for the training of enumerators. A large number of female enumerators should be trained for interviewing women in the purdah.

Services of international organizations could also be sought, if need be, at the planning and execution stages of the census exercise.[5] Overall, the cooperation and understanding of the politicians and leaders would invariably lead to the cooperation and understanding of the masses. Past experience shows that the masses often listen to what their revered leaders and spokesmen tell them. Any distortion of facts or miseducation as to the real need for accurate head-count must necessarily have adverse consequences. The real task is therefore that of disabusing people's minds about introducing partisan considerations in the census exercise. This, in our opinion, is a task that must be undertaken well in advance of the actual census-taking exercise. In doing this, however, the population should not be made to be too census-conscious by over-emphasizing the good things of life that will accrue to the various groups as a result of census-counts. The need for accurate data for proper planning and management of the public sector of the economy should rather be stressed.

NOTES

1. Type of family can be categorized under (a) head and spouse only; (b) head, spouse and children/others; (c) head only; (d) head and children/others (no spouse).
2. The *employed* are those who, in the week prior to the census, did any work for pay, profit, commission or payment in kind in a job or business or on a farm *plus* those who work 15 hours or more a week without pay in a family business (or farm) or those who had a job, business or farm but were not at work because of illness, accident, leave, holiday, production hold-up due to bad weather, plant breakdown or because they were on strike. On the other hand, the *unemployed* are in two categories. The first category consists of those not actively looking for the work *plus* those who worked less than 15 hours a week without pay in a family business. This group is *not* part of the labour force. The second category consists of those who did not have a job or business or farm and were actively looking for work or were laid-off from their jobs without pay during the census period. This group is part of the labour force.
3. Type of dwelling occupied includes private (i.e. private house, share of private house, self-contained flat, shed/hut, tent, other); non-private dwelling; camper-out (temporary); migratory (villa units, hotels and motels).
4. Okonjo (1968: 82–3) cites the instance of Awka—one of the divisions in which the federal census officer reported over 100% recorded increase in population. Okonjo draws attention to the fact that Awka Division had a low male/female ratio in the 1953 census. The people are itinerant farmers who move to neighbouring and distant towns to work for money. Okonjo (1968: 82–3)

By 1962 when clan unions called on all their citizens to go to their home-villages for the count, it should not be surprising "that Awka Division should show an abnormal increase in men". (Okonjo, p. 83). All such facts call for a better understanding of the socio-cultural environment in different parts of the country.

Udo (1968: 102) suggests that with the cancellation of the 1962 census and the decision to mount the 1963 census, there was the need to invite impartial supervisors either from the OAU or the United Nations. However the reaction of the authorities to the suggestions was that "such a move would portray the country to the outside world as incapable of carrying out such a basic exercise as census-taking". This counter-argument was inconsistent with a situation where we were already largely dependent on external aid even for revenue for the implementation of our development programmes. What could then be strange about asking for assistance regarding the conduct of our census?

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DISCUSSION I & II

(Chapters 1, 2, 3, 4)

Chairman's Opening Remarks

Lady Jibowu, the Honourable Commissioner, of the NPC observed that census means:

(1) Jobs for enumerators
(2) Constituency delimitation
(3) Revenue allocation, etc.

for different people. She then introduced the topics and the authors and called on them to present their papers. And at the end, she summarized the papers. She noted the main emphases laid by all papers:

(1) lack of data in Nigeria for planning
(2) type of data required for planning
(3) suggestions on how to get the data & the use of one to cross-check the other especially population census.
(4) areas of use of data for planning such as schools, manpower, etc. for the greater welfare of the people.
(5) emphasis on involving all the population commission enumerators; supervisors and trainers should be well chosen.
(6) women will be needed not just for the purdah, but at all levels of the exercise
(7) good maps and aerial survey maps for all enumeration areas.
(8) experts–within and outside Nigeria should be consulted

Problems

(1) care should be taken of difficult areas, (riverine areas) and itinerant labourers and nomadic peoples.
(2) ethnic and primordial loyalties

Longterm planning for success requires:

(1) re-orientation of attitudes for masses & elites
(2) education of the people

Session I: Rapporteur's Report: The meaning and Utility Services of Population Census

Comments on Dr I. O. Orubuloye's Paper

1. MR MAHMUD, **Ministry of Economic Development, Kaduna**

Mr Mahmud raised the following questions.

a. Are all population questions under the umbrella of the National Population Commission? If it is, is the Commission informing all the agencies involved before in the population area of this?
b. What are the interactions of the Commission with other governmental bodies as far as the logistics of the national population count is concerned?
c. What is being done in the mean time to utilize findings in the universities and research institutes?

2. MR ONUOHA, **National Population Commission**

Mr Onuoha commented as follows:

a. The charging of fees for the purpose of registering births and deaths is ill-advised. Registration should be made free.
b. To further reduce costs, especially transportation costs, maternity homes etc. should be built nearer the people.

3. PROFESSOR S. ADAMU, **Department of Statistics, University of Ibadan**

Professor Adamu raised the following questions:

a. What is a census in the context of the exercise we are undertaking? He observed that the Commission should have a clear meaning of the census. Census, he noted, is similar to a survey. It deals with the collection of basic data on human population.

It is more than a head count. It could be a census of people, a census of agriculture and it could be partial or complete.

4. DR ONAIFE, **University of Ibadan:**

He observed that there is a general weakness in Nigeria. This weakness, he observed, is that no one is willing to collect data.

5. MR FALODUN, **Director, National Population Commission**

(a) Mr Falodun drew the attention of participants to the powers of the Commission as spelt out in the first part, 3rd schedule of the Constitution. Though the Commission has exclusive powers in the population area, actual operations will be carried out with the help of other people and organisations.
(b) Mr Falodun referred to the Conference of Chief Statisticians as one venue where interactions among officials in this area can be effected. He regretted that he is never invited to such meetings and even when invited the notices never get to him on time.
(c) Mr Falodun observed that the Commission would need about three years to prepare for a population count, and that it is already doing preparatory work.
(d) Mr Falodun observed that he would not like to take issue with

Professor Adamu. However, he noted that at the Commission Census means a head count.

(e) Finally, Mr Falodun noted that getting statistics from the women in purdah was not an impossibility. The contributor who stressed that it was impossible was merely expressing a personal opinion.

6. **DR O.O. AROWOLO, Department of Sociology University of Ibadan.**

Dr Arowolo disagreed with the definition of a census as a population count. He indicated that the count should also include questions on characteristics of members of the household. Mr Falodun interjected that there was no disagreement between his views and those of Dr Arowolo. He stressed that the Paper of the Chairman of the Commission and his (Falodun) paper amply demonstrate the correct position.

7. **DR. A.E. OKORAFOR, University of Nigeria, Nsukka**

(a) Dr Okorafor noted that the Commission has siad that it is doing something on vital registration. He cautioned that his experience in vital registration research in the former East Central State suggests that registration centres should be very close to the people. Also registration time should be after office hours. Finally, the Commission should experiment with sample vital registration in all states before attempting to cover the entire nation.

(b) Dr Okorafor further urged the Commission to publish the list of all localities in each local government area headquarters for inspection. This will ensure that corrections from the people can be incorporated before a final list is drawn.

8. **MR OLOMOJAYE, Central Planning Office, Lagos.**

Mr Olomojaye observed the problems of planning and the lack of statistics are well-known. He noted that in spite of this deficiency that planning goes on. However, each new plan takes off from where the old one stops.

Response By Dr Orubuloye

(a) Dr Orubuloye disagreed with Mr Olomojaye's suggestion that the problems of planning are well-known. He illustrated his point with the empirical data from a state of the federation. In this state about 60,000 pupils of the 110,000 who started school with the U.P.E. will graduate primary 6 by June 1982 The other 50,000 will be the dropouts. However, only 20,000 places are available in secondary schools to cater for the in-coming 60,000. He noted that the State Planning Ministry was unaware of the existing imbalance and was not planning to meet it. He advised the Central Planning Office to liaise more with the state counterparts to derive inputs for planning purposes.

(b) On vital registration he made the following observations:

(i) The charging of fees should be reconsidered. He, however, noted that some local government areas consider registration as a source of income. Therefore, in such areas, you can register even if you have no child.

(ii) He noted that emphasis in the conference has been on population censuses. He advised that other sources of gathering data should be considered.

(c) On politicians, involvement with population census, he reminded the participants that it was not physical. However, they find their way around it. He then posed the question: Do we have to gather data on the population situation in this country by conventional means given our problems?

Comments on Dr M. Duze's Paper

(1) **DR PITTIN, A.B.U. Zaria**

Dr Pittin agreed with Dr Duze's stress on the need for demographic research. She, however, wanted Dr Duze to produce evidence about *empty* rural areas, and urban areas that are bursting at the seams.

(2) **ALHAJI TUKUR BABA,** University of Sokoto

(a) Alhaji Baba observed that the system of Purdah should be understood within the religious circumstances that gave birth to it. The problem of data gathering within purdah is solveable, for example, FEDECO succeeded to register women in purdah in 1978.

(b) He also asked that government should publish the result of the 1973 census.

(3) **DR KADEJO, National Population Commission**

Dr. Kadejo asked Dr. Duze to clarify the Kano registration of deaths which he discussed in his paper.

(4) **DR MAKINWA–ADEBUSOYE, University of Benin**

(a) Dr Makinwa–Adebusoye asked the Commission to catalogue and publish data in its possession

(b) She also wanted to know the states with commission offices and the ones without.

(c) She finally elaborated on the difficulties of registering a baby in Benin. There registration costs ₦5.00 and the form when collected is bound to contain mistakes. She suggested using teaching hospitals as registration centres.

DR. DUZE Response:

(1) Dr Duze supported the analysis of data and dissemination of the results. These data, he suggested, are held by Universities research

institutes, and consultancy groups, for example, those that worked on Abuja projects.

(2) Dr Duze referred to the distortion of age distribution found in urban areas and the pressure of population on resources in urban areas as what he had in mind in his characterization which Dr Pittin was disagreeing with.

(3) Dr Duze did not see the practicability of the Kano death registration as an issue. He suggested that it works and is an attempt to get more data than existed by the previous method.

MR FALODUN, Director, National Population

(1) Mr Falodun explained that as of now the offices of the commission have been opened in the 12 older states. Of the 7 new states, Bauchi Gongola, Imo and Ondo have offices. The Niger office is being organised. Therefore 2 states, that is Ogun and Benue have no offices.

(2) Mr Falodun warned that publication of the 1973 census figures, by anyone will be illegal since the result of the 1973 count was cancelled by the Government.

Comments On Dr A. O. Okore's Paper

(1) **MR OLOMOJAYE, Ministry of National Planning, Lagos**
Mr Olomojaye posed the following questions:
  (1) Can there be a right-time in Nigeria for a census count?
  (2) Can we have a national census?
  (3) Should not we design a new census module to fit Nigerian conditions?

(2) **MR ONUOHA, National Population Commission**
Mr Onuoha questioned the wisdom in advocating the use of foreign experts.

(3) **DR KADEJO, National Population Commission.**
Dr Kadejo asked Dr Okore to explain how he plans to get politicians out of the population count.

DR OKORE'S RESPONSE:

1. Dr Okore agreed with Lady Jibowu, Chairman of the Theme I session, that women should be involved in all facets of the census work. He noted that women were part of the professional group he advocated should be utilised, for example, demographers, sociologists, statisticians, etc.
2. He observed that if we had waited since 1963 to have a count, we can still afford to wait for another 3 years to ensure proper preparations.
3. In response to Mr. Olomojaye's questions, Dr Okore suggested October to May as ideal for the census. This is the period of dry weather.
4. To conduct a good census he suggested that we have to have the national will, the organisational ability, the executive capacity and discipline. He appealed to leaders to show good examples. He warned against adopting a

defeatist attitude.

5. On the use of foreign experts, he maintained that we can use them. He argued that since we are using their food, clothes, machines, etc. we might as well use their brains.

6. He bemoaned out attitude to data gathering. He oberved that available data are stored away in cabinets and our general attitude to data gathering and publication become a routine.

7. Dr. Okore is flexible on the involvements of politicians. He feels that they can be used.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

SESSION III

Depoliticizing Population Enumeration in Nigeria

The Census And Effective Resource Utilization

M. C. Duze

NIGERIA, with an estimated population of 84.03 million in 1980[1] is the most populated country in black Africa. This figure implies an ample supply of human resources that can be effectively utilized in our march towards economic development. The development of any country, whether large or small, depends significantly upon her knowledge of the size and composition of her population because only through this knowledge can this very important component of development be utilized. The general impression among Nigerian scholars is that this vast resource is not receiving adequate attention and many attempts have been made to suggest ways of making better use of our human resources. But basic to any effective utilization of the human resources of course is a fairly reliable evaluation of the resources. Here the census comes in as a means of determining, among others, the size and composition of the population. Despite the fact that Nigeria has had at least thirteen partial or total head counts since 1866[2], the knowledge of the size and composition of her population is still far from being adequate. Heavy reliance is put on the 1963 census despite the fact that it is common knowledge that the census was frought with problem.[3] Apart from this generally accepted census, the alternatives are summary indices from world bodies like the United Nations and the Population Council or those derived from restricted sample surveys which, in most cases, are primarily academically oriented. Now that another census year is being conceived, the need is felt to carefully evaluate what went wrong in the past with a view to avoiding past occurrences and generating more reliable information through the census.

This paper is not directly concerned with how to organize and execute the next census, but with long term considerations that will change the total attitude towards the census and thereby allow for better execution of future censuses. It suggests ways to make the census an acceptable institution rather than a once-in-ten-years isolated event. By doing this, maybe Nigerians will realize that population is not just an instrument to be manipulated for political reasons, but an asset in the quest for economic development. More important will be the realization that all development efforts should be geared towards improving the lot of the population. In other words, this paper goes beyond the immediate plans for the next census and looks at ways to arrive at a situation where census taking will be seen as a necessary exercise

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* *Dr. M. C. Duze lectures in the Bayero University, Department of Sociology, Kano.*

for generating valuable information on human resources. The idea will be to find ways of making people realize the importance of the census in effective resource utilization in the quest for development. And coupled with this is the idea of knowing for whom the developmental goals are set: who benefits or who is affected by the developmental process. The paper suggests three necessary ingredients to this long-term goal:

1. Re-orientation of thinking
2. Education of the people
3. De-emphasizing the census

1. Re-orientation of thinking

The importance of demographic information is well known to demographers and people in related disciplines. We know that "censuses help greatly in dealing with the complex problems of social administration in industrialized communities, for instance in the solution of transport difficulties and the determination of manpower available for industry and the defense services"[4]. This is especially true for the developing countries which are presently undergoing tremendous changes in all spheres. It is true that Nigeria has undergone more changes in the 20 years since independence than she went through in the years of colonial rule. And these changes are far from abating. As a matter of fact, one can argue that these changes will continue for many more years to come. To effectively monitor and control these changes, there is a need for fairly reliable demographic information since these changes affect the lives of the people resident within the country. This need is not a concern for the central government alone but also challenges each state administration as well as individuals.

The importance of demographic information to any government in Nigeria, be it federal or state can be said to stem primarily from 2 factors:

(i) the dynamic nature of the Nigerian population
(ii) the emphasis placed on the population issue in virtually all spheres of governmental activities.

On the first factor, in Nigeria today, we find that the population is very dynamic. Dynamic in the sense that we are witnessing vast changes in vital rates as well as phenomenal population redistribution consequent on socio-economic development. These changes are also closely related to the increasing awareness by governments of their responsibilities to the people. Since the second World War partially as a result of the transfer of excess war technology to the developing countries and partly as a result of greater demands by the colonies, there emerged a clear improvement in the welfare of the inhabitants of the colonies. First we had improvement in trade relations. Then came the health and nutritional improvements along with greater interest in education. These improvements accelerated with independence in 1960 with the result that by the mid 60's, the death rate for Nigeria had declined somewhat over the pre-war level. Presently, the death rate is put at about 22/000. Meanwhile, with better nutrition, and better health techniques and facilities, the expectation of life increased substantially while the birth rate had remained virtually stable. The result is an unprecedented rate of natural increase. This rate is presently estimated to be between 2.5 and 3.0 per cent per annum. This rate might sound low as percentage go, but if we remember that most European countries are growing at an annual rate of less than 1 percent, we begin to grasp the implications of this rate.

Apart from just increasing the size of the population at a dramatic rate, this kind of growth has other implications. A population growing at the rate given to Nigeria will invariably be a young population with over 40 percent of the population aged under 15 years. This kind of age distribution creates a lot of problems to any government. The dependency burden will be very high since this huge chunk of the population will not be economically productive for quite some years. But they will have to be fed and clothed and prepared for entry into the labour force. The result is the depletion of savings by individual parents and the diversion of scarce resources by government just to expand existing facilities like schools and hospitals rather than investing in new income–generating projects. Also, this kind of age distribution creates a skewed demand for goods and services, as well as generating an element of political and social restlessness. The restlessness can be heightened if there is substantial unemployment which is a common phenomenon in most developing countries. Given the dynamics outlined above, it is obvious that no government, be it state or federal, can claim to adequately cater for its population unless it has a clear idea not only of the size, but also of the characteristics of the population.

Now we look at the question of population redistribution. While it is true that the lot of the average Nigerian has improved since independence, it is also true that a lot of these changes have been fairly localized in the urban areas. Governments now have shown a greater commitment to spreading urban amenities to the rural areas, but the progress so far made has not had any significant impact on rural–urban migration. The cities still remain centers of attraction for the average young Nigerian. The average rural dweller actually has very limited opportunities after a secondary education. Jobs are limited and amenities are glaringly lacking. Also, the youthful nature of the population creates an itch to move and the ideal place for the rural dweller of course is the city where he can live a life of glamour. The result is that in many parts of Nigeria, the rural areas are virtually empty of population while the urban centers are bursting at the seams with youngsters from the rural areas.

The second factor mentioned was the emphases placed on population by successive Nigerian governments. Population has been, and still is the single most important factor in revenue allocation from the center to the states. But it will not be true to say that most Nigerians are aware of these facts. The average Nigerian believes that the Nigerian population is large and therefore is not to be worried about. This is understandable since it is a direct carry over of the idea that numbers mean strength. The result of this is that there is gross ignorance among Nigerians regarding the Nigerian population. A recent questionnaire addressed to undergraduates in a Nigerian university on their perceptions of sex ratio in Nigeria elicited such replies like four females to every male or even ten females to every male. One result of this ignorance is the tendency to see population as something that is completely removed from the normal sphere of study. The economist does not see why he should be interested in studying population neither does the political scientist. This thinking on population closely affects the thinking on the census. With the census, the cost aggravates the problem especially when we remember the past history of Nigerian census taking. Thus the census is seen as a waste of money, an exercise that drains so much of our limited resources only to generate rejected or useless information. Given this attitude, it is not surprising that people do not see beyond the census exercise itself into the intended aims of the census. The census of population should be seen as a means to an end, not as an end on its own. It should be seen as a means of generating useful information rather than an exercise that has been conducted for its own sake.

Tied with this problem, of course, is the political issue. The census is often viewed as a weapon in the hands of the central government used to reward friendly states and punish hostile ones. Thus, it is a common belief that the census is a sham aimed at fooling the general public while the actual figures released for the consumption of the public are those presented by the government. Also, the interest in the census for some people stems mostly from the desire to know the size of their states or constituencies for purely political reasons. This political factor was stressed recently by the *New Nigerian*[5] when the editorial pointed out that the ' survival and stability of this nation should come before the principle of knowing how many we are. It is dangerous to start a head-count without removing all the obstacles against having accurate and acceptable figures."

The source of the danger the paper gave as the role of population in revenue allocation. This comment is typical of the general lack of enthusiasm about another population census in Nigeria. The past experiences of course do not help matters much. The problems of the 1963 census are generally well known by now. So also is the fact that the 1973 census figures were rejected or never published for public consumption.[6]

The question that arises is, can we really have a reliable head count? There is the need to convince people that an accurate census is not only desirable but attainable in this country. This issue is problematic since, given a negative attitude towards census taking, there is bound to be a general luke-warm response to any census figures published at the end of any census exercise. As Cox[7] puts it, "The quality of the results will depend on both persons (enumerator and general public) but, (in spite of the help of a trained registrar or enumerator), will vary mainly according to the nature of the respondent". The contention here is that before we can effectively utilize our human resources, there is a need to change these impressions about the census. We have to generate a feeling among the people that the census is a necessary exercise and that the information generated therefrom affects every member of the population. Here the concern is not only with proper tabulation and circulation of census results but also increased dissemination of population information not only to governments but also to the general public at large. Of course we can take refuge in Cox's statement that "experience shows that the first few censuses conducted in a territory rarely achieve such a degree of completeness as those held after a long series of previous enumerations"[8] and hope that things will take care of themselves. But then we have to bear in mind that the major benefit from experience is that we can learn from past experiences. Rather than wait for things to work themselves out, we have to look into the past to enable us plan for the future. Here the demographer can play a very important role. Demographers are perhaps the most exclusive or introverted people in the Nigerian academics. There is the tendency for the demographer to see himself as different from his colleagues in the social sciences. We pride ourselves on our scientific approach to studying population and look down on people who find population statistics too cumbersome to understand. The result of course is that demography remains a mystery to fellow academicians. A break from this tradition is a necessary step towards reshaping the thinking of the public on the census. After all we are the ones directly involved in studying the population and it is up to us to make sure that people understand what we are doing, as well as see the importance of the information we generate. The suggestion being made here is increased population activities outside the purely academic world. We have to carry our work to the people in an attempt to bring out the importance of population information as well as the relationship between population and other resources. This can be done through seminars, articles in newspapers as well as public discussions of population issues. The National Population Commission can play a crucial role here as a co-ordinating body. The idea that activities should be limited to planning the next census is wrong and does not help to change the attitude towards the census. Activities should be on a continuous basis within each intercensal period. Beyond this is the need to establish a data bank based on effective data collection and dissemination channels in all the nineteen states in the federation. The National Population Bureau has an office in each of the nineteen states in the federation and each office is supposed to be a repository of population information. Unfortunately, in most of these offices, the so called libraries are always virtually empty with the result that even scholars looking for information have to turn to alternative sources. It is

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true that a lot of sample surveys have been done in this country, but where does one get a catalogue of what has been done? It is necessary to have a reservoir of research findings, articles and papers in this field. And not only is there the need for a reservoir there is the need to circulate available information not only to demographers but also to the general public and other interested consumers. Occasional articles in the newspapers on demographic – economic inter-relations can go a long way in changing the thinking about the census.

2 Education

As pointed out earlier, the majority of Nigerians do not know the importance of the census. They see it as an exercise by a select group of people carried out because it should be done every ten years. Education about the census hitherto has been limited to public announcements a few weeks before the census on why people should co-operate with enumerators. The result of this short-sighted approach has been to generate undue interest in the census–moreover, this approach has not succeeded in breaking down traditional barriers to population enumeration. As Cox[9] points out, "some primitive peoples believe that it is unlucky, or even impious, to hold a census and will consequently do all they can to thwart the most carefully laid administrative plans."

This is true of Nigeria where the counting of human beings is taboo in some cultures. The typical objections raised to head counting whether cultural or social have been outlined by Adegbola[10] in his paper. The point being made here is that these barriers will have to be broken before we can hope to obtain any accurate figures for the country. While the political issue can result in inflated figures, tradition and ignorance can lead to non-operation despite the legal status of the census. Obviously these changes cannot be achieved through the type of mass education usually adopted shortly before each census. There is the need for long-term plans aimed at eventually changing these beliefs through proper education, preferrably on a continuous basis.

At present in Nigeria, demography as a subject is taught under various names in many universities. But no university offers a first degree programme in demography. Thus, it is often seen not as a discipline within its own rights but as part of a larger discipline be it sociology or geography. The result of this of course is a reinforcement of the general ignorance about the census. It is surprising that in a country where one of our largest assets is our population base, not much emphasis is placed on studying population at most levels.

Education on the census can be achieved through direct dissemination of information to the general public and through our educational institutions.

In the first instance, we are talking of something similar to the suggestion made in the first part of this paper, that is increased activities in the field of population through academic channels as well as through the mass media. On the second aspect, we are concerned with generating an early interest in population matters. Subjects like economics and government are taught in most of our secondary schools. But even in places where social sciences are taught at this early stage, no where is there any noticeable emphasis on population. Introducing population as a factor worthy of study at an early stage can greatly improve the present attitude towards the census especially since we are concerned here with long run considerations. Of course the suggestion is not that demography as a discipline should be taught in our secondary schools but the inter-relations between population and other resources, as well as population and development can be disseminated at this early stage. This will create an awareness of the role of population information in development, as well as create a realization that government activities should be ultimately geared towards improving the welfare of the population. This awareness will in turn generate a demand for population information, a demand that will ultimately affect the attitude to the census. Moreover, this approach can produce a crop of more qualified or more useful enumerators. The role of the enumerator in past censuses has been discussed by several writers on Nigerian censuses. In most cases, the enumerators are subjected to rushed, short-term training programmes without really realizing the importance of their jobs. They are equally victims of the common beliefs held by the general population.

3. **Emphasis:**

The discussion here will be focused on the over-emphasis placed on the census as the source of demographic information. It is true that the census, if properly executed, is a powerful demographic data source. But as the experience in Nigeria has shown, when too much emphasis is placed on the census, there tends to be problem. There is therefore the need to relieve the census of some pressures through developing alternative or supplementary sources of national demographic information. Not only will these alternatives relieve the presure, they will also serve as checks on the census itself.[11] Several alternatives have been suggested including the use of the sample census[12], [13], remote sensing[14] and so on. Even people in the field of engineering have suggested alternative ways of data analysis to generate usable estimates e.g. cluster filtering. No attempt will be made here to go into merits and demerits of all these alternatives.

Talking about the problems expected with a census in 1983, the *New Nigerian* editorial[15] pointed out that "the way to begin is through a compulsory registration of births and deaths and the national identity card scheme. It is data from these that would form the point of reference and corroborate census results". For long-term considerations then, while the sample survey can be a useful supplementary source of information, it will not be adequate. The vital registration information will in the long run prove more useful in terms of generating general acceptable indices. Most states in the federation have compulsory registration of births and deaths, although compliance with the law is an entirely different matter. In Kano State where compulsory registration is in force, the problem or compliance poses a big challenge to the officials. Thus for death registration, the Health Services Management Board post people at all public cemetaries. The duty of these people is to unobtrusively collect information about the deceased from people who come for a burial. The information is then recorded in the death register. Births of course is even more problematic. But if what we do have for selected urban centers are properly used and published on a regular basis, we can have a reduction of emphasis on the census.The national identity card could have served as an effective supplement to the census. It could have given usable estimates of the Nigerian population. Also, periodic sample surveys, conducted on a national or regional basis could generate important information on the population. But more important than just generating estimates and indices is the circulation of the information. The idea is to let it be known that population trends are continually being monitored so that the census will be seen not as the only source of information but as a confirmation of existing information. This kind of shift of emphasis or sole reliance from the census might ensure less politicization of future censuses apart from these alternative sources serving as checks on census data.

Conclusion

This paper has avoided the well trodden ground of suggesting methods and ways of making the next census a better one. Rather it has adopted a long term approach to improved census taking by looking at factors that could be considered in an attempt to arrive at a stable situation where population is seen as an asset. It has attempted to look at ways through which the census in Nigeria could eventually be a means for effective resource evaluation and utilization by suggesting simple but probably effective steps.

NOTES

1. Kano State of Nigeria, *Statistical Yearbook, 1977.* Statistical Unit, Ministry of Finance and Economic Development. p. 19
2. O.O. Arowolo, 'Designing the Next Census', paper presented at the First Conference of the Population Association of Nigeria, 1980.
3. The 1963 census has been a subject for udy by many scholars. The references are many. Among the more recent ones is the paper presented at the First Annual Conference of the Population Association of Nigeria by Olukunle Adegbola: 'The Nature of Nigerian Censuses'.

4. Peter Cox, *Demography* Cambridge University Press, 1976 p. 21
5. *New Nigerian*, editorial 22nd January, 1982.
6. Adegbola, *op cit.*
7. Peter Cox, *op cit*, p. 21
8. *Ibid*, p. 47
9. *Ibid*, p. 29.
10. Adegbola, *op cit*
11. Louis Henry, *Population: Analysis and Models* Edward Arnold Publishers, 1976 p. 9.
12. Ademola Igun, research proposal on Experimental Design for Timely Collection of Reliable Demographic Data.
13. Alfred O. Ukaegbu, "Towards an Alternative Method of Obtaining Population Census type Information in Nigeria." Paper presented at the First Annual Conference of the Population Association of Nigeria, 1980.
14. J.F. Olorunfemi, 'The Role of Remote Sensing in Population Estimation." Paper presented at First Annual Conference of PAN, 1980.
15. *New Nigerian, op. cit.*

Political Factors In Census Taking In Nigeria

A. E. Okorafor

Introduction

IT MAY ,perhaps, be safely assumed that the need for periodic national population censuses is not in doubt, at least among this audience. However, it may bear some repetition to remind ourselves that for national demographic studies a fundamental requirement is a profile of the main characteristics of the population, namely, size geographical distribution, sex and age divisions, employment and so on. According to Brass (1968:34) it is extremely difficult, if not impossible, to plan for social and economic development without such a profile. For example, to plan community services (including agricultural, medical and educational services) and to assess human resources and needs, it is essential to have adequate statistics for quite small areas of a country. As sample inquiries and surveys (though possessing many advantages) cannot efficiently provide information for small communities, the population profile can only be drawn from a complete census in which every person is enumerated.

The paper is divided into three sections. The first section discusses the Nigerian experience in census-taking while the second section is taken up with suggestions as to how to eliminate or, at least, reduce the political factor in the conduct of census exercises in this country. The last section gives the summary and conclusion of the paper.

1. Census Experience In Nigeria

Censuses were taken in Nigeria in 1866, 1868, 1871 and thereafter every ten years up to 1931. Before 1911 the census area was made up of Lagos Island and small parts of the mainland. In 1911, 1921 and 1931 the census areas were extended to cover the whole country, but the figures obtained were based largely on estimates and guesses. After the Second World War an attempt was made to improve on the poor state of knowledge of the population of the country and censuses were mounted in 1950, 1952–53, 1962, 1963 and 1973.

The 1911, 1921 and 1931 Population Estimates

In the 1911 census, an attempt was made to estimate the total population of the provinces making up Nigeria.

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* *Dr. Okarafor lectures in the Department of Economic, University of Nigeria, Nsukka.*

> In the main ports, including Lagos, there was a house enumeration, but for all the other areas only estimates were made. The British administrators in charge admitted that the census figures were only preliminary and of little value for comparative purposes. The situation was worse in Northern Nigeria, where the estimates were made on only a sheet of paper and despatched to the Colonial Office. . . The figure of 8.12million for the Northern Provinces was contested by local administrators, who made separate estimates for the Colonial Office which gave a population of 9,274,000 for the Northern Provinces.

However, the census returns gave the population of the Northern Provinces as 8.12 million and that of the Southern Provinces as 7.94 million giving a total of 16.06 million for Nigeria (Aluko, 1965: 374).

In the 1921 census the scope of the enumeration was extended. The count was taken in two parts—a township census confined to municipal areas, and a provincial census. It is claimed that the former was more accurate than the latter (Aluko, 1965: 373 and Okonjo, 1968: 79). The census returns gave the population of Nigeria 18,631,442, but these were later revised upwards to 18.72 million and were distributed as follows: Northern Provinces: 10.56 million and Southern Provinces: 8.16million (Aluko, 1965: 374).

Originally an all-inclusive census was planned for the whole country in 1931. This scheme was, however, modified by the governor's orders in April, 1930 to exclude the southern provinces of the country because disturbances in the Onitsha, Owerri, and Calabar Provinces of Eastern Nigeria had interrupted the arrangements being made. The women in these areas feared that the objective of the enumeration was not only to tax women, but also to increase the taxes on men. In 1931, actual enumeration took place only in Lagos and in five townships and 201 villages in Northern Nigeria. For the majority of the population (96 per cent of the indigenous population of Northern Nigeria and 98.6 per cent of that of Southern Nigeria) the figures were obtained from existing records. The returns gave the population of the southern provinces including the Colony as 8,493,247 persons (not quite different from the 1921 figure of 8,368,512 persons) and that of the northern provinces as 11,434,924, giving a total of 19,928,171 persons for the whole country, including the mandated territory of the Cameroons (Okonjo, 1968: 79). On the basis of these results Aluko (1965:375) observed that "this tends to confirm the impression that the 1931 census; gave a gross underestimate of Southern Nigeria. It seems obvious that all population figures between 1900 and 1931 were largely inaccurate and may have been consistently underestimated."

The 1950–1953 Censuses

No census was taken in 1941 on account of the Second World War. Between 1950 and 1953 a census of the entire country was taken as follows:

Lagos: 1950; Northern Nigeria: May, June and July 1952; Western Nigeria: December 1952 and January 1953 and Eastern Nigeria: May, June and August 1953. The returns were as follows: Lagos: 272,000 persons; Northern Nigeria: 16,840,000 persons; Western Nigeria: 6,087,000 persons and Eastern Nigeria: 7,218,000, giving a total population of 30,417,000 for the country, excluding the trust territory of Southern Cameroons.

On the 1950–3 census Aluko (1965, p. 376) is of the view that:

> Not only the process. . . but also the results, attracted suspicion and controversy. Of the recorded total of (30.42m.), 16.84 were in Northern Nigeria . . . The figures were contested mainly by Southern Nigerian politicians, particularly when they came to be used as an argument for giving Northern Nigeria 50 percent representation in the federal legislature. It was freely alleged by southern politicians that the British administrators had inflated the population figures of the north in order to ensure that political power in the country remained with the northern politicians, who were regarded as more favourably disposed towards them.

The 1962 and 1963 Censuses

In the words of Aluko (1965:376–7) "the reluctance to allow census-taking gradually faded away after 1952, when the regional governments were set up, and the people began to see that parliamentary and local council representation, government amenities, and the relative importance attached to towns districts, provinces, or regions were largely dependent on the recorded population of each." He goes on to observe that "the more literate people became overzealous about the value of a census and they were prepared to do anything, not only to enumerate all their people, but also, if possible, to engage in double or triple counts. The political leaders also became even more enthusiastic than others about the census returns, because they regarded them as an instrument of political power" (1965, 377).

The 1962 population census took place from 13 to 27 May 1962. Apart from the increase in the amount of money voted for this census (some ₦3 million or approximately 7 kobo per person to be counted as opposed to a figure of less than one kobo per person counted in the 1952-53 census), the census organization was in itself an improvement on former census organizations. The 1962 census results were cancelled after a heated and prolonged controversy which featured charges and counter charges to the effect that certain regions had inflated their figures. A new count was ordered in 1963, but when the figures were made public they were rejected by the governments of the Eastern and Mid-Western Nigeria. The federal Government, together with the governments of Northern and Western Nigerian Government took the Federal Government to court on the grounds that the handling of the census by the latter was "unconstitutional, ultra vires and illegal". However, the Federal Supreme Court ruled that it had no jurisdiction over the administrative function of the Federal Government and so the official figure for the population of Nigeria remained at 55.6 million (Udo, 1968: 97).

Suffice it to say that even today many Nigerian demographers, statisticians, administrators and scholars are hesitant to accept the above total population as accurate.

The 1973 Census

The 1973 population census was conducted from 25th November to 1st December 1973, although in many areas the count was extended for one or two more days to 3rd December. The National Census Board, with its Headquarters in Lagos had overall control of the census. The Board was assisted in each state by the State Census Office which in turn was advised and assisted by the State Census Committee. Local civilian personnel were employed as supervisors and enumerators except in the disputed areas where neutral officials were deployed. Each enumerator was accompanied by at least one army personnel, whose duty included the dubbing of the thumbs of persons enumerated with indelible ink in order to prevent double counting.

It was hoped by many that with the military administration of the country the 1973 population census would be successful and so provide the country with accurate demographic statistics which would permit a far-reaching analysis of population development in this country. That hope remains unfulfilled, for the provisional result of 79.8 million persons announced in respect of the 1973 census did not command widespread acceptance and was subsquently cancelled by the then Federal Military Government.

Reasons for the Failure of the 1973 Census

Udo (1978) advanced four main reasons why the 1973 census failed. These are:

1. The composition of the membership of the National Census Board;
2. Inflation of census figures in the field;
3. The refusal of General Gowon to take the advice of the National Census Board; and
4. The usurpation by Mr. Ukpabi Asika of the post of the Chairman of the Committee of Experts (Udo, 1978: 8).

In this section we shall be concerned only with the first two reasons and we shall quote extensively from Udo, not only because he was a member of the National Census Board which presumably superintended the 1973 census exercise, but also because we find his comments quite insightful. On the membership of the Census Board, Udo (1978:9) observed that "census taking is basically a technical, not a political exercise" and that "it is also a national exercise and should be run by a federal body such as the new

National Population Bureau (NPB) which was set up by decree in April 1976, on the recommendation of the dissolved Census Board." He then goes on to indicate his awareness that the special body to conduct the next census would be "the National Population Commission (NPC) which is one of the bodies recommended in the Draft Constitution." He further notes however,

> that while endorsing the establishment of the National Population Commission, the Consistuent Assemly has taken a most retrogressive step by deciding that the Population Commission should comprise . . . a chairman and not less than nineteen members. I submit that the recommendation of the Constitution Drafting Committee that the Population Commission should comprise. . . a chairman and not less than seven but not more than nine members was more thoughtful. The decision of the Constituent Assembly is disturbing and sad in that it has not considered seriously the need to de-politicise the census exercise. How does the Constituent Assembly expect the nineteen members who will presumably be state representatives to behave differently from their predecessors in the dissolved National Census Board (Udo, 1978, p. 9).

Drawing from his experience in the dissolved Census Board, Udo (1978: 10) recommends that the decision of the Constituent Assembly "be reviewed immediately" and he hopes "that all members of the National Population Commission will be people closely associated with census taking, such as demographers, statisticians, geographers and economists" and that "there should be no room for administrators, or the representation of such interests as trade unions, national union of students, the armed forces or market women."

With respect to the inflation of census figures in the field, Udo asserts and also demonstates that "there was large-scale cheating by field staff during the last (1973) census". He is of the view that "not all the fraudulent practices can be related to politics since some enumerators who spent much time in drinking places, simply made up for lost time by filling in the census forms with fictitious information." (Udo, 1978: 14). Nevertheless, the upshot of his discussion is that by and large the widespread cheating in the 1973 census exercise was politically motivated, just as in the 1962 and 1963 ones.

2. Depoliticising Census-taking in Nigeria

Considering the frightening proportions that fraudulent practices in census enumeration have assumed since 1962 and in view of the current crisis of values in this country, depoliticising the census exercise does not appear to be an easy matter. However, it is not impossible of solution. As a pre-requisite, the political leaders have to make up their minds as to whether they really want to conduct an accurate census. The events of the post-independence censuses show clearly that the leaders in the various parts of the country were more interested in returning higher figures for their state vis-a-vis other states, than they were in the accuracy of the census returns. Consequently they used all the tricks in the book to achieve this aim. In the 1973 census, for example, some state representatives would not disclose the number of enumeration areas (E.A.'s) in their states until certain other rival states disclosed theirs. The idea was to make sure that they gave figures (with respect to the number of their E.A.'s) which were higher than those of their rivals, thereby paving the way eventually to returning higher population figures as well, since, in a way, the size of population would be expected to be functionally related to the number of E.A.'s.

Depoliticising census-taking in this country calls, in my view, for positive action in two main areas, namely, (1) the composition and powers of the National Population Commission (NPC) and (2) a major campaign to educate the Nigerian public (both the political leaders and the followers alike) as to the over-riding need to obtain accurate population figures even as the cost of sectional and personal political and/or economic ambitions. On the NPC, it would appear that Udo's recommendations have largely been ignored as the current members of the Commission are just state representatives. However, all is not lost as the commissioners can still allow themselves to be guided by the fact that census taking is a technical rather than a political exercise. This is of utmost importance because a realization of this fact will ensure that whatever demographic expertise they themselves lack can be overcome by their willingness and resolve to use the services of proven experts in this field. Furthermore, they will also have to take steps to keep themselves fully briefed as to the basic behaviour of population variables.

It will also be necessary for members of the NPC to regard their task as essentially national rather than sectional, in spite of their having been appointed on the basis of state representation. They must therefore resist all pressures from their state functionaries to perform as the representatives on the former National Census Board (NCB). This means that they will subscribe to the fact that demographic variables have known patterns of relationships. This implies that these relationships can be subjected to accepted scientific tests and that the results can be accepted or rejected solely on the basis of these tests. If the Commission accepts the spirit of the above discussion, then it must ensure for itself sufficient powers to be able to have complete control over the organization and conduct of the census. In this regard, it should be observed that in the 1973 census exercise the government statisticians and census officials were assigned roles peripheral to those of the military governors who actually dictated the nature of the count and it is sad to say that the latter behaved very much like the politicians of the first republic.

A campaign to educate the public on the necessity to obtain an accurate head-count cannot be overemphasized. It would appear that the present constitution has gone some way in reducing marginally the paramount importance of population size for the control of the executive arm of the state. This is reflected in the provision, among others, that to become the President of the Federal Republic of Nigeria, a candidate must obtain at least 25 percent of the votes cast in at least two-thirds of the states. The implication here is that it would no longer be useful to try to inflate the population of a handful of states so as to be able to obtain a simple overall majority through them. On the other hand, even if the total population of two-thirds of all the states is less than half the total national population, a candidate who obtains 25 percent of the votes in each of these two-thirds of the states is qualified to become the president.

However, since representation in the House of Representatives and the state houses of assembly, as well as the allocation of some proportion of the national revenue, will still be based on population, we must still have to grapple with the now entrenched propensity to inflate census figures. It must be pointed out at this point that the recent agitation for more states and local government areas have not helped matters, as population size is a key factor in the realization of these objectives. At any rate, it would appear that the underlying motivation for these agitations is the uneven distribution of amenities not only among states but also within states. It is therefore suggested that to remove or, at least, reduce the impact of the census on revenue allocation among states (and local governments within states) the federal, as well as the state governments should undertake a bold and imagginative programme of development throughout the country with a view to ensuring that such amenities as good roads, pipe-borne water, electricity, free education and better health care are available to all communities in the federation. This would have the effect of neutralizing the enthusiasm of the general public in cooperating with any leaders who may want to inflate census figures for their states or localities for political reasons.

It may also be necessary to freeze the number of representatives in the house of representatives, state houses of assembly and local government councils at their current levels for a period extending to four or five years beyond the next census. This is to further remove the sense of immediacy attaching to the use of census figures for political representation.

The above suggestions are by no means exhaustive, but taken together, they can go a long way to ensuring a successful census count for this country. Since the technical aspects of census organisation is a subject for a future conference, it has deliberately been left out of this discussion. At any rate, it is my belief that this issue is within the competence of professionals within Nigeria to handle. The real bottlenecks are the political factors; their removal would reduce the problem of census-taking in this country to manageable porportions.

3. Summary and Conclusion

The paper started by noting the paucity of demographic information on Nigeria. It then reviewed briefly the census-taking experience in this country. In the process it was seen that post-independence censuses were characterized by blatant overenumeration, owing largely to political and economic factors. These had to do with party representation and control of the Federal Legislature as well as "the allocation of funds from the financial pool and of federal grants." (Udo, 1968: 98–99; Yesufu, 1968: 106–107).

Various measures were then suggested for removing or, at least, reducing those political factors that impeded efforts at accurate census exercises in the past. It was suggested, for example, that the NPC should ensure for itself sufficient powers to enable it assume complete responsibility over all the various aspects of the census. A corollary to this is that the Commission should see itself as representing the national rather than sectional interests. A further suggestion dealt with the necessity for a massive and thorough campaign to educate the general public (both leaders and led) to appreciate the need for an accurate head-count in this country. Specific suggestions in this respect were:.

Freezing representation at the federal, state and local government levels at their current positions for a period extending to four or five years beyond the next census in order to reduce the immediacy of the impact of this census on current political representation, and.

The undertaking by both the federal and state government of a bold and imaginative programme of even development throughout the country.

It may be useful by way of conclusion to say that the involvement of United Nations experts in a future Nigerian census is not a necessary and sufficient condition for achieving an adequate census exercise in this country. It may be useful to involve the United Nations but, as Udo (1978: 4) correctly reminds us, "no team of wizards or experts from the United Nations or even from the moon can produce a reliable and acceptable census figure for Nigeria . . . it is only Nigerians who can and will eventually make it possible for Nigerians to have a reliable population census.'"

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Depoliticizing Nigeria's Population Census

*Gesiye Angaye**

1. Introduction

POPULATION refers to the number of people living in a place or country and the actual number of people is obtained through a population census which is the official counting of the country's inhabitants at a given moment in time. The main determinants of population growth are the birth-rate, the death-rate and the rate of migration.

The birth-rate is the number of births in a year per thousand of the population, whereas the death-rate is the number of deaths in a year per thousand of the population. The population increases where the number of births is more than the number of deaths, assuming net migration is zero or negligible and decreases where the number of deaths exceeds births.

Migration is the movement of people from one place to another. With balanced births and deaths a net inward migration leads to an increase in population while a net outward migration results in a decrease in population.

The determination of the population size, structure and growth rate is not problematic in places and countries where an efficient institutional machinery conducts fairly accurate population censuses in a conducive political atmosphere, and where reliable records of births, deaths and migration are kept.

The National Population Commission was established under section 140 of the 1979 Nigerian Constitution. It is empowered to

- undertake periodic enumeration of population through sample surveys, census or otherwise;
- establish and maintain a machinery for continuous and universal registration of births and deaths through-out the federation;
- publish and provide information and data on population for the purpose of facilitating economic and development planning, and so on.

Projecting from previous census exercises the task before the National Population Commission is arduous, though not insurmountable. The purpose of this paper is to lay further emphasis on the urgent need for and the importance of an accurate population census, trace the chequered history of census-taking in Nigeria and make some proposals to depoliticize the census issue and thereby pave the way for a successful population census.

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* *Dr. Gesiye Angaye teaches in the Department of Economics, College of Education, Port-Harcourt.*

2. The Rationale

The rationale for an accurate population census in a federation such as Nigeria is that public facilities and services such as education, health, housing, water, electricity and other government projects are distributed partly on the basis of population, and partly on economic and political grounds. Whereas purely economic reasons and locational advantages accounted for the siting of the Port Harcourt and Warri Petroleum refineries, population, political and strategic consideration were paramount in the location of the refinery in Kaduna.

Furthermore, federal funds, grants and revenue are allocated to the states partly on the basis of population. From 1970 to 1979 for instance, 50 percent of the Distributable Pool Account was shared among the states on the basis of population and 50 percent on the basis of equality of states.

Population figures are invaluable for national development planning and decision making. An accurate census gives the government the correct number of people it has to cater for; the age, sex occupational and geographical distribution of the people and the rate of population increase. National development plans take into careful consideration the rate of growth of population, as well as the growth rate of national income because real economic growth requires the rate of growth of national income to exceed the growth rate of population.

For instance, Nigeria's Fourth National Plan shows that the Gross Domestic Product (GDP) at factor cost will grow from ₦36.1 billion in 1980 to ₦51.1 billion in 1985, giving an annual average growth rate of 7.2 percent. This implies an annual growth rate or about 4.6 percent in income per capita terms as population is assumed to be growing at about 2.5 percent per annum.[1]

Population figures are also used for constituency delimination. Based on the principle of representation by population, Kano State (which had the largest population of 8.5 million, and 5.2 million registered voters), had 46 members out of the 449 members of the House of Representatives in 1979, while Niger State with the lowest population of 1.8 million, and 1.0 million registered voters had only 10 members.

The importance of a country in international organisations such as the United Nations and the Organisation for African Unity (OAU) depends partly on its population. With an estimated population of about 82 million in 1979 Nigeria takes the first and tenth positions respectively in the African, and world population size races.

Nigerian is surpassed in population size by only Mainland China C 1,012 million, India (667 million). USSR (236 million, United States (221 million), Indonesia (148 million) Brazil (119 million), Japan (115 million) Bangladesh (88 million), and Pakistan (84 million), And this accounts for the country's dominance in the Economic Commission for West African

State (ECOWAS), the OAU and other world assemblies.

The amount of foreign investment, aid and grants flowing to a nation partly depends on the population of the country. Even though effective demand is partly a function of income per capita and the distribution of income, a large population is likely to have a larger market, all things being equal.

3. Past Population Censuses

Realizing the importance of accurate population figures, the federal government of Nigeria had conducted several head-counts. The first population census covering the whole country was conducted in 1911. Earlier censuses taken in 1866, 1868, 1871 and thereafter, decennially covered only Lagos Island and some parts of Lagos mainland. Table 1 shows the population of Lagos from 1871 to 1911. Needless to say, these figures are not very reliable. For instance, the decline in population in 1891 is accounted for by faked census returns in 1881 when enumerators were paid according to the number of people each of them counted, while enumerators were paid by the day in 1891. High illiteracy, unwillingness to be counted for fear that the census will result in increased taxation, superstitious belief that it is unlucky to reveal the names and numbers of their families, especially children are other reasons advanced for the inaccuracy of censuses taken in Lagos.[2]

TABLE 1. POPULATION OF LAGOS – 1871 – 1911

YEAR OF CENSUS	Areas Covered (sq. Miles)	MALE	POPULATION FEMALE	TOTAL
1871	1.55	13,520	14,998	28,518
1881	1.55	19,450	18,002	37,452
1891	1.55	15,656	16,852	32,508
1901	–	21,176	20,671	41,847
1911	18.00	39,865	33,901	73,766

The 1911 census recorded 7,858,689 people in Southern Nigeria and 8,115,981 in Northern Nigeria, making a total of 15,974,670 for the whole country. A house-to-house enumeration was made in only eleven principal ports in Southern Nigeria and the rest were estimates based on the best available data.[3] There is no evidence of how the census returns of Northern Nigeria were obtained. And the acting governor expressed the view that the native population was underestimated and that a more correct figure would be 9,274,981 instead of the reported 8,115,981.[4] Thus, the 1911 population figures are nothing more than rough estimates.

The population increased from 15.95 million in 1911 to 18.6 million in 1921, giving an annual growth rate of about 1.6 per cent. The 1921 census was conducted in two parts – a township census which was completed in a day, and a provincial census which took two months to complete. In the township census an attempt was made to secure an accurate count of all persons resident in the municipal areas or township[5] and thus scope of actual enumeration was extended. The provincial census which covered the rest of the country was not as successful owing to shortage of staff and transportation, and hostile attitudes of the people towards enumeration. In the South for instance the census report claimed that there was no more than a 5 per cent error in the township census, but noted that if 10 per cent were added to the population of the natives the result would be more accurate.[6]

The next census was taken in 1931 and it was fairly successful in the Northern Provinces where:

(a) An intensive Census in which each individual was separately enumerated on special schedules covered five townships, the households of non-natives and educated native foreigners residing outside the townships, and specially selected 201 villages; and

(b) A general administrative census in which data were collected by the administrative staff from available records covered the remaining inhabitants. The census exercise, however, encountered such problems as lack of funds and personnel, low level of literacy of the enumerators, and the superstition that enumeration would be harmful to women and children.[7] The margin of error claimed in the returns of the intensive census was one and 2 percent while that of the general census was 5 per cent or less.[8] In view of the difficulties faced during the census the margin of error seems to be underestimated.

The 1931 census in the Southern Provinces was much less successful especially in some parts of Eastern Nigeria, where women rioted, suspecting the census would be used for tax purposes. In fact, actual enumeration was made only in Lagos and a few small areas and the census consisted mainly of transcripts from tax returns with the addition of non-adults and adult female.[9]

The Government Statistician estimated the total population of Southern Nigeria at about 20 per cent more than the official census returns.[10] The 19.6 million recorded as the total population of Nigeria, yielding an annual growth rate of only about 0.5 per cent between 1921 and 1931 reflects the incomplete nature of the 1931 census.

The decennial census series was interrupted in 1941 by the Second World War. The next round of censuses, now known as the 1952/53 census, were taken in Lagos in 1950, in the Northern Region in May, June and July, 1952, in the Western Region in December 1952 and January 1953 and in the Eastern Region in May, June and August 1953. The 1952/53 census recorded a total population of 30.4 million showing an annual growth rate of about 2.1 per cent. This higher growth rate is due partly to the 1931 undercount and partly to improved efficiency in the 1952/53 census which was the first comprehensive enumeration of the people throughout the. country. Nevertheless, as with its predecessors, population was underestimated partly because people who did not understand the meaning and purpose of the census refused to be enumerated, and partly because of defects in preparation and administration.

The census reports claimed overall accuracy of over 97 per cent in Northern Nigeria, [11] of 95 per cent in Western Region[12] and a margin of error of 3 per cent in Eastern Region[13] but such high degrees of accuracy seem to be unjustified especially in the light of, and retrospection from the next census figures.

The next complete census was undertaken in may, 1962 but because the census results did not receive the general approval of all the four governments in the Federation it was nulified. The census was retaken during November, 1963 in a tense political atmosphere as political respresentation, control, and revenue allocation at the centre are determined mainly by population. The census recorded a total population of 55.6 million. And with an area of 923,768 square kilometres the population density was 60 persons per square kilometre. Table II indicates the population size and regional distribution from 1911 to 1963.

But the acceptance of the 1952/53 and 1963 census figures implies a population increase of 83 per cent in ten years, giving an unprecedented population growth rate of 5.6 per cent per annum. Hence the 1963 census has become the subject of great political and academic interest. As there was no net repatriation of Nigerians from abroad the high growth rate is attributable to an undercount in 1952/53 and an overcount in 1963.

TABLE 2 Population—Total and Regional 1911 – 1963)

	TOTAL	NORTHERN REGION	WESTERN REGION	EASTERN REGION	MIDWEST REGION	LAGOS
	(000)	(000)	(000)	(000)	(000)	(000)
1911	15,975	8,116	7,859+			
1921	18,631	10,260	8,371+			
1931	19,553	11,434	3,677	4,316		126
1952–1953	30,417	16,840	6,087	7,218		272
1963	55,670	29,809	10,266	12,394		665

+Southern Provinces and Lagos.

Sources: *Census of Nigeria,* 1931 (London 1932/33), Vols. I, II, III & IV; *Population Census of Nigeria 1952—53,* (Lagos: 1953/54); and *Population Census of Nigeria 1963,* (Lagos: 1964).

The military regime attempted another head count in 1973; on May 8, 1974 they released a fantastic provisional total population figure of 79.76 million. The 1973 census result was however cancelled because there was neither political, nor military concensus on its acceptability.

The foregoing census review shows that although Nigeria uses population estimates based on the 1963 census figures, for all purposes there is no firm demographic foundation upon which to make population projections for the country, as the real rate of population growth, the degrees of population underestimation before 1963, and overestimation in 1963 are all unknown parameters. Hence the urgent need for an accurate and acceptable population census.

4. Towards State Equality and Successful Census

A successful future census exercise must endeavour to overcome the past census problems such as poor census administration, the lack of skilled manpower; funds and efficient communications; ignorance, illiteracy and the suspicious and superstitious attitudes towards enumeration, misconstrued meaning and purpose of census for tax purposes; the low appreciation of the importance of reliable statistics and the manipulation of population census figures for economic and political reasons.

Some of the previous obstacles namely the lack of trained manpower, funds and communications, illiteracy, superstitious beliefs and ignorance may not be as serious as they were in the past. But the greatest problem is how to eliminate the impact of other considerations such as the desire to obtain greater public revenue, political representation and power on the census exercise and thereby minimize the manipulation of population figures for politico-economic purposes.

These other considerations can be controlled by the creation of a balanced federation of fairly equal states, de-emphasis of the population principle and emphasis on the principle of *equality* in political representation and participation, and the distribution of public revenues and projects. And the only feasible way to obtain a balanced federation is the creation of more states.

It is, however, pertinent to know the objectives and the socio-economic consequences of creating new states before embarking upon further proliferation of states. The objectives of creating new states can be briefly summarized as follows:

- to allay the minorities fears of domination by the major ethnic groups;
- promote political stability;
- facilitate faster and even socio-economic development;
- bring good government nearer to the governed;
- create more opportunities for the sons of the soil; and
- to achieve a balanced federation.

At independence in October 1960, Nigeria with about 250 ethnic groups was divided into three regions; the Northern, Western and Eastern regions. There was also the small Federal Territory of Lagos.

In August 1963, the Mid-Western Region (now Bendel State) was created out of the former Western Region. And on May 27, 1967 twelve states were created: The former Northern Region was split into six states; the former Eastern Region into three states while the Mid-Western Region remained intact. The Federal Territory of Lagos and the colony province of Western Region were merged to form Lagos State and the remaining part of Western Region became the Western State. On February 3, 1976 seven more states were created to bring the total number of states to nineteen.

There is no doubt that the splitting of the former three regions (North, – West – and East –) which were large enough to hold the nation to ransom has ensured some measure of political stability, brought government nearer to the governed, created more opportunities for some people, minimized some minorities' fears of domination, particularly within the states, and promoted more rapid and even development.

It should however be noted that much of the development that has occurred and the opportunities created can be credited to Nigeria's mineral oil (petroleum) wealth. State creation per se does not create developmental resources. It rather consumes resources by way of additional and, at times, wasteful duplicative administrative structures that could have been better utilized to finance development projects.

And all the states are heavily dependent on federally collected petroleum revenue. In 1979–80 financial year for example, ₦4.59 billion or 88 per cent of the total recurrent revenue of state governments, of ₦5.22 billion, came from federal, sources, whereas their internal revenues amounted to only ₦0.63 billion or 12 per cent.[14] Petroleum revenues account for about 80 per cent of federally collected revenue. This implies that if the oil wells dry up suddenly, certain states may have to eliminate some ministries and projects and retire some commissioners, political appointees and workers.

With respect to the allaying of minority fears of domination it seems that the creation of more states has created more minority problems than it has solved. In the former three regions minority cries were concentrated mainly in three areas or groups: the whole middlebelt (the Tivs, Idomas, etc) versus the Hausa – Fulani in the North; the Mid-West (Edos, Urhobós, Isokos, Ibos, Ijaws etc) versus the Yorubas in the West; and the Calabar, Ogoja and Rivers (Ibibio–Annang, Ijaws, Ikwerres, Khanas) verus the Ibos in the East.

But based on the increasing demands for more states it seems that real or fancied fears of discrimination persist presently in almost all the nineteen states. Minority ethnic groups such as the Oron, Efik, Ogoja etc are complaining of domination by the majority Ibibio–Annang in Cross River State; the Ikwerres, Etches and Khanas verus the Ijaws in River State; the Urhobos, Isoko versus the Edos in Bendel State; the non-Tivs against the Tivs in Benue State. The former key accusers have thus become the accused and there is no doubt that when more states are created more minorities will emerge to accuse the current chief accusers.

Even houses within the major relatively monolithic ethnic groups have become more divided against themselves as evidenced by the manifest antagonism between the Ijebu Yoruba and the Egba Yoruba in Ogun State; the preponderant Ekiti Yoruba and other Yorubas in Ondo State; the Oshun Yoruba versus the rest in Oyo State; the Northern Hausa-Fulani versus the South Zaria Hausa in Kaduna State; the Wawa Ibo versus the Onitsha Ibo in Anambra State; the Njaba versus the Mbaise Ibo in Imo State.

Thus minority fears of domination can hardly be solved by state proliferation, unless we constitute each ethnic group into a state (about 250 states!). Even then clans, towns and villages will complain of discrimination by other sections as noted above in the relatively ethnically homogeneous states. Hence the urgent need to find alternative ways of allaying minority or majority fears of domination.

The upsurge of the renewed demands for new states are attributable to several factors. The revenue allocation formula which weights the principle of equality 40 per cent is the biggest bait attracting big states and ethnic groups to form smaller states. Any state that splits into two hopes to double its equality share of revenue without realising that if the number of states is also doubled (and there are now demands for about thirty new states) then none will get any extra revenue.

The experience with previous and present poor, authoritarian, parochial, and insensitive administrations, minorities fears of domination, discrimination and being in perpetual opposition in a prestigious presidential system where chief executives wield wide executive powers is another factor. It is not surprising that a few state agitators have been accused of having vowed to be Heads of state in hades rather than serve as heads of service in heaven. To allay such fears we will propose a system of government where all states and local government areas or senatorial districts will produce presidents and state chief executive respectively.

The desire to possess more political power and representation is another cause. Each new state is entitled to five senators. And judging from the voting pattern in the 1979 presidential elections and ethnic group that splits into numerous mini-states numbering two-thirds of the total number of states is assured of the presidency in perpetuity. Hence we will propose that no single ethnic group should be granted more than a quarter of the total number of states however *genuine* the requests. If two ethnic groups constitute two-thirds of the total number of states they could collude to share the presidency and reverse the country to the same situation in the former three big regions of unholy alliances and compromises among the privileged groups to share political booty.

The present nineteen states can be classified into five groups viz:

1. The predominantly Hausa/Fulani states (HF): Kano (8.5 million), Sokoto (6.7 million), Kaduna (6.1 million) and Bauchi (5.6 million) with a total projected population of 26.9 million in 1979.
2. The predominantly Yoruba states (YO): Oyo (7.7 million), Ondo (4.0 millon), Lagos (2.4 million) and Ogun 2.3 million) with a total projected population of 16.4 million in 1979.
3. Multi-ethnic states I (MSI): Borno (4.5 million), Gongola (3.9 million); Plateau (2.9 million), Kwara (2.5 million) and Niger (1.8 million) with a total projected population of 15.6 million in 1979.
4. Multi-ethnic states II (MSII): Cross River (5.1 million), Bendel (3.6 million), Benue (3.6 million) and Rivers (2.5 million) with a total projected population of 14.8 million in 1979.
5. The predominantly Ibo states (IB): Imo (5.4 million) and Anambra (5.3 million) with a total projected population of 10.7 million in 1979.

Although Nigeria's priorities should be the provision of adequate food, shelter, employment opportunities, quality and quantity education, health facilities, technological and economic development rather than state proliferation, we nevertheless propose the creation of one state out of each of the above five groups to achieve state and ethnic equality and equilibrium, and also circumvent the two-thirds dilemma in presidential elections.

As illustrated in table 3 each ethnic group's share of the twenty-four states is fairly proportional to its land area and population. Each of the former Western and Eastern Regions contain six states; the Southern and Northern sections comprise twelve states each; and no single ethnic block or even two combined groups command two-thirds or sixteen states to monopolize the presidency. These checks and balances should be taken into careful consideration in the event of creating new states.

With respect to the states to be created we suggest the splitting of the relatively large Cross River State in the second group of multi ethnic states, and the splitting of the most populous Oyo State in the Yoruba group. And for even population and territorial distribution, an area encompassing parts of Anambra and Imo states, and also an area embracing parts of Borno and Gongola States can be carved out for the third Ibo state, and the sixth state in the first group of multi ethnic states respectively. Finally the centrally placed Kaduna State could be split into two with the contiguous large and populous Kano and Sokoto States shedding some surplus population and land area to effect state balance and equality within and between the Hausa-Fulani states.

Given the spirit of give-and-take the suggested five states could sail through the turbulent constitutional sea as they are accidentally shared equally by the five political parties in power–Cross River by the National Party of Nigeria; Kaduna State by Peoples Redemption Party; Anambra and Imo by the Nigerian People's Party; Bornu and Gongola State by the Great Nigerian People's Party and Oyo State by the Unity Party of Nigeria.

And each of these fairly equal states and ethnic blocks as well as the local government areas or senatorial districts within the states should be given a fairly equal chance to head the federal and state governments respectively. Hence we propose a rotational system of the Presidency, the governorship and other key public functionaries as illustrated in tables 5 and 7. Such a system of government will reflect the federal and state character in the various tiers of government, promote national unity, a sense of belonging and loyalty among the diverse peoples of the federation, check further state proliferation, minimize cut-throat competition among states, ethnic groups and communities in presidential and gubernatorial elections and also eliminate the inflation of population figures to gain economic and political power.

As shown in Table 4 the presidency rotates from the most populous Hausa/Fulani group with a vice-president from the second multi ethnic states, to a Yoruba president with a vice-president from the first multi ethnic state. This is followed by a president from the first mixed group of multi ethnic states with an Ibo vice-president. Thereafter, a president from the second multi-ethnic states with an Hausa/Fulani vice-president is followed by an Ibo president with a vice-president from the first mixed group. This rotatory system applies to the posts of the senate president, the speaker of the house of representatives, and other key political posts.

The posts of governor, deputy governor, speaker and so on also rotate between senatorial districts in the states. In the Rivers state for instance, table 6 shows that the governorship rotates from a candidate from the most populous senatorial district, A (SDA) with a deputy governor from the least populous senatorial district E (SDE), to a governor from SDB with a deputy governor from SDD. This is followed by a governor from SDC with a deputy governor from SDA, and then a governor from SDD with a deputy governor from SDB and so on.

TABLE 4 Nigeria's Population, Area and Density (1979)

NO.	STATES	1979 POPULATION	LAND AREA (sq km)	DENSITY (per sq km)
A	*Predominantly Hausa/Fulani (HF)*			
1.	Kano	8.5	43,285	196
2.	Sokoto	6.7	102,535	65
3.	Kaduna	6.1	70,245	87.
4.	Bauchi	5.6	64,605	87
	Sub. Total •	26.9	280,670	
	Average pop/Area. of 4 States	6.7	70,168	96
	Average pop/Area. of Prop. 5 States	5.4	56,134	

B.	*Predominantly Yoruba (YO)*			
1.	Oyo	7.7	37,705	204
2.	Ondo	4.0	20,959	191
3.	Ogun	2.3	16,762	137
4.	Lagos	2.4	3,345	717
	Sub Total	16.4	78,771	
	Av. pop/Area of 4 States	4.1	19,693	208
	Av. Pop/Area. of Prop. 5 States	3.3	15,754	
C.	Multi-ethnic States (M S I)			
1.	Borno	4.5	116,400	39
2.	Gongola	3.9	91,390	43
3.	Plateau	2.9	58.030	50
4.	Kwara	2.5	66,869	37
5.	Niger	1.8	65,037	28
	Sub Total	15.6	397,726	39
	Av. Pop/Area. of 5 States	3.1	79,545	39
	Av. Pop/Area of Prop. 6 States	2.6	66,288	
D.	*Multi-ethnic States (MS II)*			
1.	Cross River	5.1	27,237	187
2.	Bendel	3.6	35,500	101
3.	Benue	3.6	45,174	80
4.	Rivers	2.5	21,850	114
	Sub Total	14.8	129,761	
	Av. Pop/Area. of 4 States	3.7	32,440	114
	Av. Pop/Area. of Prop. 5 States	3.0	25,952	
E.	*Predominantly Ibo (B)*			
1.	Imo	5.4	11,850	455
2.	Anambra	5.3	17.675	300
	Sub. Total	10.7	29,525	
	Av. Pop/Area. of 2 states	5.3	14,763	362
	Av. Pop/Area. of prop. 3 states	3.6	9,842	
	Fed. Capital Territory		7,315	
	ALL STATES	82.7	923,768	90

Sources Federal Office of Statistics, Lagos, *Digest of Statistics*, Vol. 27 December, 1979, page 1 for 1979 Population figures. Times Press Ltd. Apapa, 1981 Nigerian Year Book for the Land Area.

The whole country and states will however still vote to choose from presidential and governorship candidates presented by political parties from the appropriate groups of states, and senatorial districts that are supposed to produce the president and governors respectively.

Given the uncomfortable but inescapable hard fact that only one person from a particular place or group could be president or governor during a given period of time, much precious political, economic and human energy required for the successful operation of the fragile new presidential system can be conserved for further utilization by a carefully mapped out rotational system of presidential and governorship succession, rather than unnecessary dissipation of energy through uncontrolled rivalry among states and ethnic groups.

Furthermore, in order to discourage states from splitting merely to enhance political representation and also to obtain more statutory revenue at the expense of unsplit states the equality proportion of revenue allocation should be standardized and fixed at 1/24 or 4.17 per cent. This implies that if a state or an ethnic block splits into two or more states without a corresponding increase in the number of states in other groups then the new ministates within the parent state should share the same equality proportion of revenue among themselves and also share the same number of senators.

5. Conclusion and Suggestions

With the balanced 24 state structure, the enthronement of the principle of equality in the allocation of revenue, public projects, political representation and appointments, and the rotational government system that gives both the big and small states and ethnic groups a fair chance of producing presidents and state chief executives, the urge to inflate population figures for political and economic gains may be minimized.

The Civil Registration Act 1979, requires all citizens aged 18 and above to be registered and issued with identity cards. This exercise should be carried out so that the number of people registered could be used to crosscheck census figures.

A continous comprehensive registration of births and deaths should also be undertaken to determine the natural rate of increase of population.

There should be a proper education of the populace on the importance of an accurate population census without politicizing the census issue.

Numerous well-trained educated enumerators should be engaged to carry out the census exercise within the shortest possible time. There should also be an interstate exchange of enumerators, supervisors and other census officers. To reduce the transportation, accommodation and feeding costs of non-indigenous census officials, the National Youth Service Corpers and other federal government officers stationed in the various states could be utilized. The proportion of non-indigenous census officers in each enumeration area, village, town and state should be about 50 per cent.

An announced simultaneous census enumeration in parts of a few representation villages and towns in each state could be conducted and used to crosscheck the validity of census returns.

In order to avoid rumours and suspicion, population census results should be published as soon as possible.

TABLE 5 Proposed Rotatory Federal Government System

TERMS	KEY POST I FEDERAL PRESIDENT	KEY POST II FEDERAL VICE–PRESIDENT	KEY POST III SENATE PRESIDENT	KEY POST IV SPEAKER OF THE HOUSE OF REPS	KEY POST V
1.	HF	MS II	YO	IB	MS I
2.	YO	MS I	HF	MS II	IB
3.	MS I	IB	MS II	YO	HF
4.	MS. II	HF	IB	MS I	YO
5.	IB	MS I	YO	HF	MS II
6.	HF	YO	MS I	MS II	IB

Foot note:

			1979 Population (thousand)	Land Area Sq Km
HF	=	Hausa Fulani (Kano, Sokoto, Kaduna and Bauchi State)	26,949	280,670
YO	=	Yoruba (Oyo, Ondo, Ogun, and Lagos State):	16,435	78,771
MS I	=	Multi-ethinic States I (Borno, Gongola, Plateau, Kwara and Niger States).	15,629	397,726
MS II	=	Multi-ethnic States II (Cross River, Bendel, Benue and Rivers State);	14,923	131,762
IB	=	Ibo (Anambra and Imo States);	10,755	29,525
		Total	82,691	923,768

TABLE 6 **Rivers State: 1981 Projected Population of Senatorial Districts, Local Government Area and Land Area**

Senatorial District	LGD	POPULATION 1981	AREA (KM^2)
A. *Senatorial District A (SDA):*	Bori	276,439	859
	Otelga	249,766	609
	Bonny	202,809	992
Sub Total		729,014	2,640
B. *Senatorial District B(SDB):*	Yenagoa	282,765	3,900
	Brass	194,366	2,760
	Sagbama	151,321	2,540
Sub Total		628,452	9,200
C. *Senatorial District C(SDC)*	Ikwerre/ Etche	315,773	2,380
	Ahoada	278,173	2,490
Sub Total		593,946	4,870
D. *Senatorial District D(SDD):*	Port-Harcourt	524,688	360
E. *Senatorial District E(SDE):*	Degema	415,972	2,530
GRAND TOTAL		2,892,072	19,420

Source: Ministry of Economic Development and Planning, Statistics Division, Port-Harcourt, Rivers State of Nigeria Population.

TABLE 7 **Proposed Rivers State Rotational System of Government**

TERMS	KEY POST I GOVERNOR	KEY POST II DEPUTY GOVERNOR	KEY POST III SPEAKER	KEY POST IV	KEY POST V
1.	SDA	SDE	SDC	SDD	SDB
2.	SDB	SDD	SDA	SDE	SDC
3.	SDC	SDA	SDE	SDB	SDD
4.	SDD	SDB	SDC	SDA	SDE
5.	SDE	SDC	SDD	SDB	SDA
6.	SDA	SDE	SDB	SDC	SDE

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7

Depoliticizing Population Census Exercise in Nigeria

J. O. Oleru

Introduction

Of all the problems relating to the conduct of population censuses in Nigeria in the last two decades or so, those with political undertones have become as prominent as to dwarf other equally nagging ones. In fact, it would appear that political issues are the only unresolved problems facing the conduct of censuses in Nigeria. Census taking, the world over is a gigantic operation which no country can take lightly. The administrative, logistic and financial problems encountered in the organisation of a census are enormous. If these problems are added to the political problems such as exist in Nigeria, then census taking becomes a near impossibility. This fact, to a very large extent explains the failure of the three census exercises in post-independent Nigeria in 1962, 1963 and 1973 respectively.[1]

In order to have an accurate, complete and reliable census in Nigeria, efforts should be geared towards insulating population from politics, as well as ensuring that proper and adequate organisational, administrative, logistic and financial arrangements are made. While it is believed that the latter could be done and in fact had been done in the past[2], it is with the former that we share some amount of scepticism.

This paper holds the view that a strong relationship exists between politics and population (which is ascertained through a census) and that the Nigerian citizens have already been made aware of this nexus. To inform them otherwise is likely to be an exercise in futility. Secondly, the paper will argue that, given the present unhealthy attitude of many Nigerians of self first, tribe/state, second, and nation third, the question of depoliticizing census in Nigeria will be a herculean task. Nevertheless, the paper will conclude by suggesting a few strategies for minimizing the bad effect of politics on census taking in Nigeria.

Politics and Census

There are three broad reasons why a population census is important to any government or nation. In the first palce, a census provides the bench-

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** J. O. Oleru lectures in the Department of Economics, University of Nigeria, Nsukka.*

mark data for social scientists for their research. Second, it facilitates economic and social planning; and third, it is used for political representation. The research and economic and social importance of censuses are always and equally felt in all countries, regardless of level of development or political ideology. On the other hand, the degree of political importance of censues varies from one country to another conditioned by the special socio-political characteristics of each country. Yesufu (1968) made this point when he said "The degree of political importance placed upon a census in any country depends a great deal upon its political maturity, the nature of its constitution, the degree of social integration between the various people of the country and the state of the political parties and the balance of power between them." Taking all the above factors into consideration, he concluded that Nigeria was one country where the internal political consequences of a census were likely to be of vital significance.

It is argued that the political consequences of a census in Nigeria today are of more vital significance than ever before. To begin with, it is doubtful whether Nigerians and their political leaders have gained an inch in political maturity since the birth of the Second Republic. Although many of the old brigades in the First Republic have disappeared from the active political scene and have been replaced by brand-new comers,–Nigerian politics still exhibits a substantial dose of suffocating acrimony, intolerance, malicious rivalry and ethnicity.

Secondly, instead of four regions, Nigeria today has nineteen states. A contest in which there are nineteen competitors is obviously much keener than a contest with only four competitors. And this is precisely how it is in Nigeria today where the nineteen states are all struggling to establish and maintain their prominence and presence at the centre. It is true that the present constitution of Nigeria ensures the equality of all the states, but it is even truer to say that our political leaders are fully aware that the more populous a state is, the stronger it will be in relation to the other states in many matters affecting the nation.

Thirdly, the creation of states has succeeded in balkanizing the country more than many people are prepared to admit. In fact it is not too much an over statement to claim that in Nigeria today statism has replaced nationalism. The net effect is that the already existing social distance among the various ethnic groups that live in the country has obtained a new dimension and therefore is becoming more complex. The task of social integration in Nigeria has thus been rendered more difficult and the question of Nigerian unity has become a taller order.[3]

Ideally, political issues should be the least important reasons for conducting a census. But in Nigeria, the reverse is the case. To buttress this argument, we note that soon after independence and before the first federal general elections, there was felt an acute need for a population census. The 1962 census was held primarily to provide the basis for the distribution of parliamentary seats in the 1964 general elections to the House of Representatives. When the results of this census were nulified by the federal government, there was the imperative to hold another one as soon as possible and before the election year. Thus, another census was held in 1963, and according to Udo, (1968) the then Prime Minister often expressed the wish to see the count through as early as possible, so that the figures could be used in delimiting constituencies for the 1964 federal elections.

Had it no been for these political reasons the government would not have committed another ₦5 million for a second census in two consecutive years![4] One would therefore seriously doubt the Federal Minister of Economic Development who was responsible for the conduct of the 1962 census, when he claimed on the floor of the House that "providing a basis for the distribution of seats in Parliament is the least of the important reasons for which we in Nigeria conduct our census".[5]

Problems of Depoliticizing Censuses in Nigeria

In the preceding section, the political significance of population numbers was identified as one of the peculiar problems militating against the conduct of an accurate, reliable and acceptable census in Nigeria. Now the question arises: Can the census in Nigeria be depoliticized? Are there any ways of reducing the political significance of population in Nigeria? If the answers to both questions above are no, must the nation continue to conduct censuses? Can the nation afford to ignore censuses as many politicians have suggested?

There are many factors which make the task of depoliticizing census in Nigeria extremely difficult. Firstly, the Nigerian constitution provides for a federal system of government with a strong central government and relatively weak state governments. The central government is perceived as belonging to all, while the state governments belong to the indigenes of their respective states. The strength of the central government derives from, among other factors, its financial superiority vis-a-vis the state governments. The central government has what has aptly been referred to as "federal might" by the Nigerian public.

In other words, the centre is where the action is! Consequently the urge to control or at least actively participate in the management of the centre is great among the states and the political parties. Furthermore, and this is unfortunate, the central government is seen as a kind of "Big Uncle" which only has responsibilities to the various components, with the components owing no obligations to it. There is also a constitutional requirement that the federal character of Nigerian be reflected in almost all facets of national life – in the distribution of amenities, award of scholarships, board and ministerial appointments, in the civil and public services etc. In most of these areas, population is a crucial factor.

The current agitations and demands for more states all over the country testify to the basic belief that there is everything to gain and nothing to lose with creation of smaller states.[6] Ethnic groups believe that they will be adequately represented at the centre as soon as they achieve separate states for themselves. So the smaller the states, the more satisfied the people become that their own interests will be protected at the centre. Fortunately or unfortunately, the constitution does not specify the lower limit of the population figure that can constitute a state. But whenever there is a demand for a new state, the state agitators always make reference to the 'large' number of people who live in the area being proposed as the new state. This actually means that population is one of the key variables in their demand for a new state. Thus, if it were possible every section of the country would like to 'manufacture' human beings so as to reinforce its requests for privileges such as statehood, separate local government areas amenities and a large share of the national revenue from the central government. This tendency underscores the political significance of population and the position is likely to remain unchanged for a very long time to come.

Secondly, our politicians and other national leaders are not politically mature. Many of them are directed and guided by self and group interests before national interests in their thinking, words and deeds. Any issues that can confer advantages to them or to their groups usually are vigorously and unashamedly pursued irrespective of the merits of those issues or the national interest. It has often been claimed that it was the politicians who introduced ethnicity in the body politics of this country in order to further their own selfish ends. We believe that they cannot completely absolve themselves of this accusation. For example, it is the politicians who politicized the census issue, accused one another of cheating and inflation of figures and generated so much bad blood that eventually dragged the whole nation into a major crisis.[7]

It is a truism that no constitution is perfect. Therefore, for the success of any constitution, the operations and executors of that constitution must be mature, honest, tolerant and, above all, patriotic. They must endeavour to understand not only the letter of the constitution but more importantly its spirit. This can ease the problem of interpretation.

For example, with respect to census and population the Nigerian constitution says" . . . the number of inhabitants of Nigeria or any part thereof shall be ascertained by reference to the 1963 census of the population of Nigerian or the latest census held in pursuance of an Act of the National Assembly after the coming into force of the provisions of the Part of this Constitution."[8] It should be noted that the constitution merely says the

1963 census *OR* any subsequent census without preferring the latter when it exists to the former. The implication to the letter of this part of the constitution is obvious. In the future, say in the year 2030, when many other censuses of population shall have been conducted in Nigeria, a President can constitutionally use the 1963 census as the basis for the distribution of seats in the House of Representatives! Maybe this part of the constitution should be amended before it creates another crisis in the country.

Nigeria is not the only country with a federal system of government nor with diverse ethnic groups within her borders. The United States of America has both characteristics. That country has fifty states and perhaps as many ethnic groups as Nigeria. But owing to the political development of the country and the maturity and patriotism of her leaders, that country's constitution has not only proved workable, but also has been a great source of national unity. It has been amended only a few times over a period of two hundred years. One may therefore conclude that the difficulty in depoliticizing the census issue in Nigeria lies not so much in the political structure and constitution of Nigeria as in the immaturity, lack of patriotism and selfishness of our political leaders.

Thirdly, the civil servants in Nigeria – the technocrats and the experts on whom falls the task of organising and administering censuses in Nigeria – need to be more effective in their role. The civil servants, by the nature of their office, are expected to implement and execute the policies and programmes of the government. They can, and also do give 'expert' advice to the government. Although they are expected always to be "the obedient servants", in their traditional role, yet we know they do wield a considerable amount of influence and formulate a substantial proportion of the government policies. This is especially true of the top echelon of the civil servants and according to Asiodu (1974) they had a big boost in their status during the period of the military regime.

It is an incontrovertible fact that the politicians or any other leaders in authority cannot influence the census figures without the collaboration and assistance from the civil servants and census experts.

This collaboration, in our view, comes readily in Nigeria. For example there were no politicians in the 1973 census and yet that census flopped because the experts succumbed to pressures from various undisclosed quarters and failed to do what they knew to be right and correct. It does appear for example that the Federal Office of Statistics' preoccupation is to ensure that their population projections are always consistent with the officially accepted 1963 census. Since 1963, Nigeria has fought a costly war and there have been massive population movements within the country. A bold federal office of satistics would have gone beyond the official figures to make independent estimates and projections of the population of the various parts of the country. We believe it has the resources to under take such an exercise or at least to hire the services of experts within our universities to do that for the government.

Another illustration to show official collaboration in population issues is the preparation of the 1979 voter's registration list. According to this list approximately 47 million people were registered. In other words, Nigerians who were at least 18 years of age in 1979 numbered 47 million. Given our high birth rate and the consequent broad-based population pyramid, a voter's registration list of 47 million would imply an overall population of some 96 million.

A first look at this figure will lead one to conclude that perhaps the 1963 census and for that matter, the 1973 census which gave Nigeria a population of some 80 million, are, after all, not overcounts as is generally believed. But a further look will cast some doubts on the reliability and accuracy of the voter's list. The turn out rates in the five separate elections make us feel that the voter's list was, as usual, inflated.

The turn out rates in all the five elections were generally very low. Table 1 (below) shows that they varied from 25.75 percent in the senatorial elections to 35.84 percent in the presidential elections. The table reveals that the turn-out rates progressively increased from the first election up to the last.

TABLE 1 **Turn Out Rates in the 1979 Elections**

Name of Election	Date	No. of Votes	Total Registered Voters	Turn out Rate (%)
Senatorial	7/7/79)	12,532,195 95	₦47 million	25.76 6
House of Representatives	14/7/79	14,941,555	" "	31
House of Assembly	21/7/79	15,166,100	" "	31.18
Gubernatorial	28/7/79	15,730,895	"	32.35
Presidential	11/8/79	16,846,633	" "	35.84

Source: *The General Elections 1979 Report*, Federal Electroal Commision.

This means that interest in the elections increased as the elections progressed.

But even the highest turn out rate of 35.84 percent recorded in the presidential election is, by international standards too low. How can one explain such a low turn out rate? It cannot be argued that Nigerians were apathetic or uninterested in politics. On the contrary after thirteen years of military rule every Nigerian would have loved to exercise his one political and fundamental right to say who should govern him. Is it possible that the Nigerian's interest would terminate with his registration to vote without actually voting? The trouble of getting registered is perhaps greater than the trouble of casting the votes, and so any rational person would not only take the pains to be registered, but also would participate in the elections. The only sensible explanation for the apparent low turn out rates in the 1979 elections would therefore be that there were simply *NO* 47 million voters in the country. There were substantial variations in the turn out rates from one state to another and from one constituency to another. While some constituencies in the south had turn out rates of 90 percent in some of the elections, others had rates of below 20 percent especially in the north.[9] It is difficult to believe that interest in the elections could have had that much regional variation. The turn out rates can therefore produce an index of inflation in population figures in the country.

Fourthly, the effects of the propaganda in the previous censuses have proved enduring. Nigerians have now been made fully aware of the importance of censuses. They therefore would not mind cooperating with the politicians and the census officials in distorting census returns. For example, if a new census were to be conducted today, one would witness a mass return of city dwellers to their rural bases to be counted there. This would distort the regional distribution of the population and give the urban population a smaller share of the total population than is normal. Ideally census should be *de facto* with questions on the census schedule from which the *de jure* population could be deduced.

Even those in the cities and other rural places other than their own are often enumerated by their relations in order to swell the numbers of their own localities. The enumerator is often told that these people are normally resident and although his instruction is to count only by sight, the enumerator would prefer to save himself the trouble of repeated call-backs by proceeding to enumerate those whom he has not seen.

Lastly, but perhaps most importantly is the fact that there is no way we can truly divorce the relationship between politics and population in a democracy with a representative system of government. The two are closely related; the people know of this relationship and it would be difficult to convince them that census has nothing to do with political representation.

Before independence and especially during the 1952/53 census the general public associated censuses with taxation. By then, the problem of undercounting was serious in Nigerian censuses. This problem has now disappeared first because the people have been told, and they have subsequently observed that the census is not necessarily related to taxation and second because they have also witnessed the political consequences of the exercise.[10]

Measures for Depoliticizing Census

The point has been emphasized that the task of depoliticizing census figures in Nigeria is likely to be very difficult. Nevertheless, it is hoped that as the country develops politically, economically and socially the political importance attached to a census would diminish.

In the short run, one way of making population numbers less of an asset for any state or group is to share responsibilities, as well as privileges to the various components on the basis of their population. For example, the inhabitants of each state should be required to pay income taxes to the central government and the amount of taxes collected from each state should be one of the important criteria for the sharing of the national revenue to the various state governments. In other words, the relationship between population and census which was formerly thought to exist should be made to exist in reality.

This suggestion seems very plausible on a number of sound economic and equity bases. To begin with, if population is a reasonable criterion for the sharing of the 'national cake', it should also be reasonable for the baking of that cake. Furthermore, the citizens of Nigeria should contribute directly to the central government for the services they receive therefrom. Similarly the burden of this taxation will be more or less equal on the inhabitants of the various states, since the income tax will be progressive. A marked variation in the geographical distribution of private income has not been observed, except that Lagos State might be atypical because of the concentration of industries there. Therefore, the amount of income tax received from each state will be positively related to the number of people in that state.

Nigeria is perhaps one of the few countries with a federal system of government in which individuals pay income taxes only to the states of their domicile, and none at all to the central government. The cental government is not that rich to forgo such an important source of income. Maybe at the present, the oil boom is enough, but at the very least, in order to correct the impression that there are no obligations that go with large population numbers, federal income tax should be introduced. The principle of derivation embodied in the present national revenue sharing formula should therefore be expanded not only to include natural resources and produce of each state but also the tax contributions of the state.

Nigeria is now long overdue for the establishment of a comprehensive national vital registration system. Certainly the introduction of a vital registration system is not a direct method of depoliticizing census, but it provides an inferior alternative way of estimating the population of a country within an acceptable margin of error and thereby reduces the necessity of having censuses too often. The problem here is that before vital statistics can be used in population projections there must be a reliable base population figures, often got from an accurate census. Also, the vital registration would have existed for several years before any meaningful estimates of the population could be made using the statistics so collected. But at least, a start could be made now.

Conclusion

In this paper, five major factors which impede the depoliticizing of census in Nigeria have been highlighted. This is the nature of the Nigerian constitution and the federal system of government, the immaturity and lack of nationalism of the politicians, the bureacratic attitudes of the civil servants, the effects of the 1962 and 1963 census propaganda on the citizens of Nigeria and finally the fact that in Nigeria a visible and strong relationship exists between politics and population figures. These facts reinforce one another rendering the task of census taking extremely difficult. At present there is indeed very little one can do to achieve a census that is free from politics. One can however suggest the introduction of personal income tax to the federal government by all the adult citizens of Nigeria no matter whereever they may be residing. This can help in reducing the absolute advantages of large population numbers. Nevertheless, in the long run when the masses of the people become truly enlightened and the country becomes more developed politically, economically and socially, the political significance of a census will diminish and by then an accurate complete and reliable census will be achieved.

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Notes

1. The 1962 census was nullified after much controversy and a recount was ordered in 1963. The results of this subsequent census were officially accepted by the Federal Military Government, though rejected by the Eastern and Mid-western governments who subsequently went to court but lost on technical grounds. This census is still considered a failure by many national and international observers who feel that the census figures were inflated and unreliable. The 1973 census was also nullified by the military government because it was suspected to be unreliable and inaccurate.

2. It is generally believed that adequate arrangements were made if not for the 1962 census at least to the 1963 census. Such arrangements included the recruitment of a United Nation's expert as an adviser, increased financial support and reduction in size of the enumeration areas.

3. Of course there is the contrary view that creation of states has united the country more than ever before. This view is held mostly by politicians with personal ambitions. Creation of states has the potential for uniting and disuniting the country but at present the centrifugal forces of state creation tend to dominate.

4. The 1962 census cost the nation about ₦3million and the decision to spend another ₦5 million by a very poor country can only be justified on political terms.

5. Parliamentary Debates, House of Representatives, 18 August 1962, column 2356.

6. At present, about twenty-one requests for the creation of new states have been lodged with the National Assembly. No political party has officially or openly opposed the creation of new states but doubts still remains as to the feasibility of state creation in view of the stringent constitutional provisions for the creation of new states.

7. The remote and immediate causes of the January 1965 coup have been traced to, among other factors, the nullified 1962 census, the controversial 1963 census and the general unhealthy political climate before, during and after the 1964 federal general elections.

8. The Constitution of the Federal Republic of Nigeria 1979, Section 69.

9. In Kano State, for example, in the election to that State House of Assembly, only 174 vote were cast in Gwaram North SC 12/KN Constituency out of the 61, 406 registered voters giving a turn out

rate of 0.28%. Many constituencies in this state recorded between 10% and 15%.

10. Following the changes in the regional distribution of population as indicated by the 1963 census, the Northern Region and the Eastern Region lost seven and three seats respectively in the Federal House of Representatives while the Western Region gained ten seats.

DISCUSSION III

(*Chapters 5, 6, 7*)

Depoliticizing Population Enumeration In Nigeria

Chairman of the Session	Mr. J.A. Olomajeye Ministry of National Planning, Lagos.
Rapporteur	Dr. I. O. Orubuloye, NISER, Ibadan.

The Political Factor in Census Taking in Nigeria

The paper is divided into three parts. The first part discusses the Nigerian experience in census-taking since 1866 to date. The author regretted the paucity and unreliability of the data generated from these censuses. The section also reveals the degree of political interferences which plagued the planning and execution of the various census so far conducted in Nigeria. The author also enumerated four main reasons which Udo considered as the major contributing factors toward the failure of the 1973 census. Out of these four main reasons, the author addressed himself to only two, namely.

(i) The composition of the membership of the Census Board and
(ii) Inflation of census figures in the field.

In the second part of the paper the author discussed measures that can be taken to depoliticize census-taking in Nigeria.
In his opinion two major factors are very important:

(i) The composition and powers of the National Population Commission and
(ii) A major campaign to educate the Nigerian public as to the overriding need to obtain accurate population figures even at the cost of sectional and personal political and/or economic ambitions.

In concluding his presentation he suggested that the federal, as well as state governments should undertake bold and imaginative programmes of development throughout the country with a view to ensuring that such amenities as good roads, pipe-borne water, electricity, free education and better health care are available to all communities in Nigeria. He submitted that this measure will neutralize the need to inflate census figures. He also suggested the freezing of the number of representatives in the national assembly state assemblies and local government councils at their current levels, for a period of four to five years beyond the next census. This measure is intended to remove the use of census figures for political representation.

Comments

Dr. Ogbonna from ABU would like the author to tell the house what he envisions at the expiration of the freezing of the number of seats recommended by the author.

Mrs Adekunle also agreed with the author that the members of the Commission should be posted to other states during census operations.

Lady Jibowu remarked that the Commission had already reviewed the issue of transfer of commissioners to states other than their own. She also remarked that members of the Commission are people with proven integrity, and that they will perform their duties to the best of their ability wherever they are posted during census operations.

Dr. Makinwa-Adebusoye supported the submission of Dr. Okorafor for freezing of the numbers of representatives at the federal level.

Dr. Okorafor responded by concluding that transfer of commissioners may not be the answer to all the problems. Much will rest on the enumerators. On the question of the integrity of the commissioners, he was satisfied with the comments of Oyo State Governor, Chief Bola Ige, who described them as men and women of high integrity; committed to the issue of even development.

Depoliticizing Nigeria's Population Census

Dr. Angaye stated the powers of the National Population Commission in the introductory section of his paper. He also discussed the rationale for the location of facilities and the history of census in Nigeria. He also discussed state equality and how to conduct a successful census in Nigeria.

The main thrust of the paper, according to the author, is to find a way for unity in Nigeria. He advocated the creation of five more states and proposed a rotational system of government that will guarantee that every unit will have an equal chance of leading the nation (or group) thus, consequently depoliticizing the issue of census.

In addition he advocated for the quick implementation of the civil registration act, the establishment of a vital registration system throughout the entire country, proper education of the public on the importance of accurate population figures, training of enumerators, interstate exchange of enumerators and supervisors, as well as quick publication of census results to avoid rumours and suspicions.

Comments

Dr. Angaye's paper generated numerous comments. Dr. Akinkoye remarked that he was greatly disturbed by the recommendations proposed by Dr. Angaye because it will lead to chaos in Nigeria. ı.

Dr. Akinkoye contended that the problem in Nigeria is the apparent lack of essential amenities of human life, such as good health facilities, education and so on.

Dr. Ogbonna also remarked that the ideal of rotating top posts as proposed by Dr. Angaye may not work. The constitution of Nigeria would have to be rewritten or greatly amended before his recommendations can be effected.

The author replied that the system which he proposed would not lead to the disintegration of the Nation, but that it would strenthen the unity of Nigeria and consequently eliminate the issue of census in sharing of positions. He concluded that the draft report of the Constituent Assembly proposed a system similar to the one he has proposed.

Depoliticizing Population Census Exercise in Nigeria

Dr. Oleru began his presentation by stating his views, namely:

- that a strong relationship exists between politics and population.
- that Nigerians know the use of census figures
- that Nigerians are basically an ethnic conscious people

He also stated three major reasons a census is needed:

- to provide bench mark data for research,
- to facilitate economic and social planning, and
- to ensure political representation.

He further stated obstacles that may militate against depoliticizing census operations in Nigeria:

- the position of the federal government and the states
- the sharing of national revenue
- the creation of states
- the collusion between government officials and politicians.

In concluding his presentation he made the following recommendations:

- – that emphasis should change from consumption to production,
- – that everybody should be made to pay income tax to the federal government instead of the state governments,
- – that population figure should be a criterion for the baking of the national cake, and
- – the establishment of national voters registration and vital statistics registers.

Comments

Mr Awogbemi supports Dr. Oleru's view that tax payment should be regarded as part of population issues. He suggested that the National Population Commission should cooperate with the other professionals in the field of population. He supported even development as remedy against the issue of population census.

Dr. Omorogiuwa remarked that income tax is not a function of the size of the population and can only be relevant if all states were at the same level of development.

Dr. Makinwa–Adebusoye remarked that Dr. Oleru should support the allegations he made against the civil servants with facts, and that sweeping generalizations should be avoided when dealing with sensitive issues. Mr Falodun remarked that civil servants alone cannot be blamed for the demise of our past censuses. And that civil servants alone cannot provide accurate census for the country – but all citizens will have to make their own contribution.

Dr. Oleru replied that he did not advocate for the replacement of taxation for population census. He strongly believes that personal income tax should be paid to the federal government.

On the question of sweeping allegations, he believes that all various actors in census operations have their own share of the blame. And that he has no special grudge against the civil servants. He concluded that he is not a pessimist as he has been portrayed.

SESSION IV

Educating the Public about the Census

8

Communication and the National Census

P. Kofo. Makinwa–Adebusoye

Introduction

A UNITED NATIONS' manual defines a population census as "the simultaneous recording of demographic data by the government, at a particular time, pertaining to all the persons who live in a particular territory."[1] After the national government has given it legal sanction and set aside specific dates for the census, the key words in this definition are *simultaneity* and *universality*. Two communication components are required to ensure these; namely, personal contacts and public information.[2] By personal contacts we mean extension education built around personnel-field workers, possibly originating from the National Population Commission. By public information we mean education and information disseminated through mass communication media and various public and private organizations. This paper will focus on these two components. It will emphasize strategy and tactics rather than the selection, training and organization of personnel to conduct the census.[3] That is, this paper argues for population education as regards the national census.[4]

For the purpose of this paper, population education is defined as the educational process which (a) assists persons to learn the probable causes and consequences of demographic change, (b) defines for individuals and communities the nature of the problems associated with population processes and characteristics and (c) assesses as the alternative, effective means by which the individual and society as a whole can respond to and influence these processes in order to enhance the quality of life of the people.[5] As defined, population education is strictly to educate the public on the need for reliable national population censuses as the *sine qua-non* of the nation's immediate and future plans for socio-economic development.

People are Nigeria's most important resource. Hence it is necessary to know the size of the population, their age and sex structure, their distribution between rural and urban areas and movements within the country, the proportion that are gainfully employed or looking for work and the number of people that are dependent on them and how these relate to the development process. A democratic government working for and with the people need these essential data for effective planning. While population education is meant to be informative and *not* to propagandize or indoctrinate, the general public needs to be informed and taught about the determinants and consequences of population trends as revealed by successive censuses and their implications for the well-being of individuals, families, communities and the whole nation. Accordingly, this paper will stress communication between the census organization and its publics in order to generate reliable data on which to base Nigeria's development plans.

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* *Dr. P. Kofo Makinwa Adebusoye is a researcher at the Centre for Social, Cultural and Environmental Research, University of Benin, Benin City, Nigeria.*

The first section of the paper seeks to identify the variety of persons and groups who must be informed and educated, the second part lists some messages of the census which should be passed on to the public as identified in the previous section. The various channels of communication are discussed in section three. The topic of section four is 'the Census and Development Planning.' Planning for primary school enrollment is cited to underscore the importance of census data as the basis for planning.

Target Groups and Channels of Information

Given the previous history of "failures" of decenial population censuses of Nigeria since independence, it becomes quite obvious that intensive education and information about the census should begin with the nation's top policy makers and "leaders of thought." It is only after this leadership group has become convinced–based on a real understanding– of the necessity of an accurate and reliable head count, that we can hope to have a successful outcome for any future census.

A situation where half-hearted support due to the lack of understanding among a country's leaders spells doom for any venture is not unique to Nigeria. In his specifications for a communication service in support of Indonesia's development, Childers[6] noted that the necessary communication paths

> do not begin with 'mass communication'–but rather, literally outside the doors of the central planners and department chiefs in the government corridors in the capital city. It is no exaggeration to state that the *first* required, especially planned and designed support communication programme may be entirely within the civil service of the capital city–from outside those top-level doors, downward through the same departments, and between them and other departments whose synchronised action, based on real understanding and intensive briefing and orientation, will 'make or break' the project there and then . . . long before what is usually thought of as 'reaching the people by mass communication.'
>
> From the central government's network of civil service, a further whole series of communication paths, for each development programme, may be traced outside to provincial levels–and then again from provincial levels to the next steps in what needs to be a sustained, intensive

total communication process ultimately reaching communities at large.

Based on the above and a list drawn up by the United Nations Economic Commission for Asia and the Far East (ECAFE) in 1967, the list of those to be informed must start with the leaders who have it in their power to make and aid national policy.[7] This leadership group can be effectively reached through personal talks, letters and group discussions and reports on the uses of the national census and the relationship between demographic trends and socio-economic development.

Following this group closely are the technical administrators and personnel of communication units. This group on whom falls the job of actually conducting the head count also needs to be convinced of the importance of their job in that the accuracy of the headcount and subsequent tabulations are crucial to future national goals for development. Channels of communicating with this group may include training courses, seminars and/or manuals. This group must also have in their possession, for distribution to the general public, information handoutsts on the role of the census in national development.

A third group includes census field workers, staff of related departments such as staff of the Federal Office of Statistics and voluntary agencies. These will need to be informed through training courses and text books/pamphlets to acquaint them thoroughly with the subject matter of the census, as well as its uses and importance.

To reach the public at large, (our fourth group), all the resources of public communication are brought into full play for a successful campaign. These include, field workers, the newspapers and other print media, broadcast, special films, posters and others.

Finally, in any campaign there are usually special groups who have not been previously covered due to their geographical location, their general seclusion from modern trends or different beliefs and outlook. These groups need special attention. It is possible that some of these have been recognized in previous censuses as 'problem groups' requiring various tactics in order to get the census message to them. It is also possible to include the under-age group, that is, those under 18 years of age and who comprise future citizens, in this category of special groups. In that case, the introduction of special population topics into secondary school curricula may be considered as a part of civic studies. The groups identified in this section and suggested means of reaching them are presented in a tabular form in Table 1.

Messages of the Census

Ideally a census consists of a personal enumeration of each individual in the country concerned. The usual practice is for census enumerators to try to reach at least one adult member in each household who can supply, satisfactorily, answers to the questions posed by the enumerator. The uses

Table 1 Target Groups and Channels of Information

TARGET GROUPS	INFORMATION CHANNELS
1. *Policy Makers* ● Legislators and administrators ● Trainers ● Mass media specialists ● Key members of organisational groups	Personal talks; letters; group discussions and reports on uses/importance of national census
2. *Technocrats* ● Technical administrators ● Personnel of communication units	Training courses; seminars manuals and informational handouts for the public
3. *Field Workers* ● Peripheral field workers ● Staff of related departments ● Voluntary agencies	Training courses, text books/pamphlets etc.
4. *The Public at Large*	All resources of mass communication— the newspapers, radio, television, movies and others; interpersonal communications
5. *Special Groups* ● Isolationists due to geographical location, religious beliefs, etc. ● Under-age students; illiterates	Specially trained field workers in international communication, backed by posters, mobile cinema, etc.

Source: Adapted from "Communication in Family Planning, "pp. 1–2.

of census counts and various tabulations arising therefrom are the same from country to country. The messages of the census can be described by asking the question who, what, where, when and why although we shall consider these in a different order to refer to the present subject matter, census counts.[8]

What? The basic goal of the nation-wide campaign and publicity is to ensure that all persons within the country are aware of the census by associating it with a picture and/or a slogan. Hence a slogan/picture needs to be of such design as to be readily recognized. It should be widely publicized so that it becomes identified with the census long before the actual census date.

Why? In a country like ours where we are still to establish a good census tradition, the National Population Commission and affiliated agencies must try to allay possible suspicions of the enumerators by full and repeated publicity on the aims and objectives of the census and the benefits to be derived from a formal count of the population. The various questions contained in census schedules are necessary to cope with the planning needs of an increasingly complex, rapidly changing, modern Nigeria. For example, efforts of the federal and state governments to provide adequate housing may necessitate the presence of certain questions in census schedules. The importance of giving correct answers to such questions which will aid in assessing housing needs must be emphasized. In this way the census is necessary to the well-being of individuals and families.

How? It is necessary to describe the different methods in which a census may be conducted. Since the country has decided on a *de facto* count, the advantages of using questionnaires and person-to-person interviews to collect population census data should be stressed and the advantages of the chosen method explained to the public.

Where and When? It is necessary to inform the public as to the exact dates for the census and ensure (perhaps through the declaration of work-free days) that individuals can participate. The public also needs to know where the enumerators expect to find them while the head count is in progress.

Who? As a highly sensitive and politicized project, people need to be reassured that neither themselves as individuals nor their state or local government area is likely to suffer—either through the demarcation of electoral districts or the sharing of National Revenue at any time in the future. This kind of reassurance is very necessary to ensure whole-hearted participation of all citizens while preventing overcount in some areas and/or delibrate undercount in others.

Choice of Channels of Communication

Simply conducting a census without any special, intensive information campaign will bring in most of those who believe in head counts as a civil duty, but a special information campaign will ensure greater coverage. A communication expert has suggested that choosing from the many channels of communication to be used should rightly be made after careful consideration of

(1) *Type of coverage*—for example, is it to saturate an entire target audience? the urban residents or rural people? illiterates or a combination of any of these?

(2) *What is expected* to be achieved such as awareness, general knowledge or detailed information;

(3) *How long* the message should stay before the audience and last,

(4) *What is the cost* of such a choice.[9] When planners of the census communication campaign have satisfied themselves on the above, one or a group of the available media for personal or public communication listed in table 2 should be selected.

Census and Planning

A national census yields the age-sex composition of the population while two or more successive ones reveal the annual population growth rate. These two population characteristics; age-sex composition and annual growth rate form the central subject in the interrelationships between a country's popu-

Table 2: **Available Channels of Communication**

	PERSONAL COMMUNICATION		PUBLIC COMMUNICATION
1.	Community leaders	1.	Newspapers
2.	Professional field workers	2.	Magazines and other periodicals
3.	Teachers	3.	Radio
4.	Ministers and other religious leaders	4.	Television
5.	One time meetings; specially organised clubs and classes	5.	Specially designed films
6.	Study/discussion groups	6.	Slides
7.	Casual groups (at markets etc.)	7.	Printed materials;posters,leaflets etc.
8.	Schools	8.	Other demonstration and teaching materials
9.	Business and industrial organisations	9.	Outdoor billboards
10.	Labour unions	10.	Permanent signs on buses, taxis, etc.
11.	Religious, political and social organisations	11.	Exhibitions songs, drama and dance' troupes

Source: Adapted from "Communication in Family Planning,' pp. 3–4.

lation and its rate of economic development. The former, in particular, determines the nation's labour force and its dependent population; and defines the reproductive potential and variations in the basic requirements of people in different age-sex groups. The age and sex variables represent not only the basis for most demographic analysis but also those which constitute the basis for policy formulation and planning.

Table 3: **Nigeria–Age-Sex Composition, 1980**
(Total Population = 100)

Age	*Sex*	*1980*
0–9	Both Sexes	34.9
	Male	35.4
	Female	34.4
0–14	Both Sexes	47.4
	Male	48.0
	Female	46.8
15–54	Both Sexes	46.5
	Male	45.8
	Female	46.7
Over 55	Both Sexes	6.1
	Male	5.6
	Female	6.5

Source: United Nations, *World Population Trends and Prospects by Country 1950–2000.*

Table 3 shows that children under the age of 14 years comprise 47.4 per cent of the total population while the proportion of people in the labour force (aged 15–54 years) is 46.5 percent. Old dependants, that is, those aged over 55 years account for 6.1 percent.[10] The dependency ratio[11] is, therefore, 1:1 or one dependent for each potential adult producer. We begin to understand what this means for the nation's development when Nigeria's 1:1 dependency ratio is compared with 1:2 which obtains in developed countries. This gives Nigeria a very young age composition. In all plans, therefore, government should take note of the need of the young, notably schools and health facilities.

The relevant age groups for primary school education are the 5–14 groups. This group, according to United Nation's estimates, represent an increasing proportion of the population, rising from 26.4 percent in 1960 to 27.8 percent in 1980.[12] By the year 2000, this proportion would have increased to 28.4.[13] For planners and policy makers the most important figures are the expected new entrants into the primary school system each year. This data can best be obtained from the census especially since there is no adequate vital registration system for the country. The example given below shows a laudable program planned with the best intentions went awry because of the lack of a reliable data base.

The Universal (Free) Primary Education (UPE) Scheme was launched with great fanfare in 1976. It was a timely and much needed project greatly acclaimed by all. Obviously, before starting such a gigantic project, planners had to make adequate provisions for classrooms, teachers and equipment. In the absence of actual census data, planners had to rely on estimates and projections to arrive at the number of the first set of beneficiaries from the UPE scheme, Primary 1 pupils. Estimates of population from projections are not bad *per se* provided they are derived from a good data base. In the case of Nigeria this is not the case as the 1963 figures on which most projections are based have been shown to be grossly inadequate.[14] Consequently, the expected (estimated) number of Primary pupils beginning school in the 1976/77 session, (assuming 100 per cent enrollment) was 2.3 million children. In actual fact, and with less than 100 per cent enrollment, the number of children who were enrolled in Primary 1 was about 3 million. This means an excess of 0.7 million pupils over the expected.[15] Since these pupils were excluded in the pre-UPE plans, primary schools were confronted with shortage of classrooms, teachers and equipment such as tables and chairs!

Nigerian leaders and the informed public were well aware that the UPE scheme fell short of expectations at its onset. No less a figure than the former Head of State in his address to undergraduates of the University of Ilorin expressed regret that the UPE scheme had taken off without adequate ground work.[16] Writing under the caption "UPE: More than we can Shoulder", Mr. Coker Onita in the *Daily Times* of April 4, 1978, stated that the most disturbing of several problems connected with the UPE scheme was that of pre-take-off planning, which, having been based on grossly inadequate data resulted, not unexpectedly, in poor, haphazard decisions.[17]

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The UPE example above dramatizes the importance of demographic data as one of the most important building blocks for socio-economic planning. The primary source of demographic data is the National Census. It cannot, therefore, be over emphasized that Nigerian leaders and the public alike need to be thoroughly enlightened as to its importance so that future head counts will provide the much needed data base for future projects and development plans.

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2. I am not a professional communicator being a demographer/population scientist by training. Some of the ideas presented herein may appear as old hat to many but they come from a different perspective.
3. This paper was inspired by William Schramm's "Communication in Family Planning, "Reports on Population/Family Planning, No. 7, April, 1971.
4. The need for a comprehensive population education for the masses, the politicians and census personnel has been suggested as one way of depoliticizing the census exercise. See, C. Morah *et al*, "Evaluation of Past, and Recommendations with Respect to Future Population Census in Nigeria", *Population and Economic Development in Nigeria in the Nineteen Eighties* United Nations, New York, 1981 TCD/SEM, 81/2, p. 24.
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10. Based on the medium variant of estimates and projections of Nigerian population, United Nations, *World Population Trends and Prospects by Country 1950–2000. Summary Report of the 1978 Assessment*, New York, 1979. ST/ESA/SER.R/33.
11. Dependence ratio is usually as the proportion of non-working to working population; that is, those aged 0–14 together with those in the age group 65 and above versus those in the age groups 15 to 64 years. Children under the age of 14 years comprise 47.4 percent of the Nigerian Population while the age group above 64 is only 3–4 percent of the population. This figures yield a dependency ratio of 1:1.
12. United Nations, *World Population Trends . . . , op. cit.*
13. *Ibid.*
14. Several authors have evaluated data from the 1963 population census of Nigeria. See, for example, I:I Ekanem, *The 1963 Nigerian Census: A Critical Appraisal*, Ethiope Publishing Corporation, Benin, 1972.
15. Had the UPE scheme been compulsory in 1976/77 this figure would have been higher than 0.7 million: Apart from Borno, Gongola, Ondo, Oyo and Sokoto actual enrolment figures in Primary 1 were in excess of the projected figures in all the remaining States. (Minutes of the National Council on Education held in June 1977, p. 1, cited in J.A. Ebigbola, "Population and Education in the Third National Development Plan and Recommendations for the Next Plan Period: A Case Study of the UPE Scheme in Nigeria," in *Population and Economic Development in Nigeria in the Nineteen Eighties. op. cit.*
16. Lieutenant General Olusegun Obasanjo Educational System Hits the Rocks" in *Daily Times*, March 14, 1978, p. 3 cited in Ebigbola, op. cit.
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Public Enlightenment Strategy for Improving Population Census Enumeration in Nigeria

E. U. Emereuwaonu,

THE AIM of this paper is to suggest ways of using the mass media and interpersonal communications to englighten the general public on the meaning of and need for accurate census enumeration as a means of maximizing the country's human and other resources.

Census enumeration is not new in Nigeria; it could be divided into two broad time periods–the colonial censuses 1866 to 1950/53 and the post colonial censuses of 1962/63 and 1973. All the post colonial censuses in Nigeria were vitiated by political considerations resulting from two main factors–revenue allocation and parliamentary seats. For the demographer, other discouraging factors include: age misreporting, and incomplete and inaccurate information.

Analysing the 1963 Nigerian Census figures, Van De Walle, in exasperation quizzed "is it possible to project the population of Nigeria under these circumstances? . . . The very size of that population is uncertain after the last census (1963); its mortality rate is unknown, and its fertility can only be guessed. Under these circumstances, the answer is no" (Brass, 1968:527). In consequence, development planners in the country have had to base their projections on educated guesses, the weakness of which was amply demonstrated by Universal Primary Education registration figures.

A new census enumeration is being planned for the country in the near future, and if the exercise is to succeed, it is necessary to identify as accurately as possible, not only why the 1963 and 1973 censuses were failures, but also the types of citizens, that are interested in census figures. Our ability to do this will enable the media practitioners to know towards whom to direct their public enlightenment efforts, and how to channel these efforts.

Many reasons have been adduced to explain the failure of census enumeration in Nigeria. Summarizing the failure of the 1963 census, Falodun (1980) attributed it to sectionalism and parochialism exhibited by those into whose hands the census enumeration was entrusted. He added[6] that the political propaganda mounted for the census of 1963 has been the bane of the exercise ever since. The people at the grass roots who up till then were very suspicious of the use to which census results were to be put (usually they associated

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** Dr E. U. Emereuwaonu, lectures in the Department of Sociology and Anthropology of the University of Benin, in Benin City.*

census taking with taxation) became interested in being counted again and again. . . [6] (1980:7). In the same vain Adegbola (1980:46) attributed the failure of the 1973 census to three main reasons: official policy; procedural and sectionalism.

We now examine these. First, *official policy:* This he referred to as the lack of a well defined official policy towards demographic statistics. According to Adegbola, the apathy towards demographic data collection in Nigeria was reflected in the ad-hoc nature of the census organizational procedures. The time allotted to population for census required at least three years. The United Nations recommended that a census required at least three years of planning and execution but for the 1973 census, only 18 months were allowed for the exercise. The result is that the various operations had to be rushed leaving little or no time for an evaluation of one operation before embarking on the next. Moreover, the ad-hoc nature of the responsibility for census-taking, resulted in treating the census as an administrative exercise, instead of the work of professionals in demographic statistics and methodology.

Having identified some of the problems of the last census, we now direct our attention to the identification of users of census figures. The nature and interests of such users will determine the type of public enlightenment messages to be issued. In this connection, the country could be categorized into four main users: The first are those who see the census enumeration as vital instrument for planning and administering social and economic development. To this group of Nigerians, census enumeration is a statistical exercise, and must be seen as such. It enables demographers and those in related fields to project more accurately the population trends in the country. The second group are those who hope to reap a political windfall through large concentration of population. To them this will enhance their claims to increased parliamentary seats and sizeable revenue allocation; in short enhance their political power. In this regard ethnic and state sentiments are whipped up in an effort to ensure large population figures. The third group are those trouble makers who may wish to cash in on the political cleavages and conflicts which may arise in the event of another controversial census. The fourth group are the generality of the citizenry, who, once they are assured that the census enumeration has nothing to do with taxation, would volunteer to be counted. They expect no political windfall from such an exercise.

Bearing these in mind, we address ourselves to the types of communication strategies to be used in coping with these problems and users. In broad outline, the public enlightenment efforts of the media should be directed towards deemphasizing political gains (representation in the assembly and revenue allocation based on numbers) pointing out that the Senate is now based on equal representation and being silent on the representation in the

House of Assembly. Emphasis should be shifted to socio-economic planning as the sole aim of the exercise. In doing this care must be taken not to give the impression that provision of amenities would be based on the census figures. Emphasis should be on the individual well-being and not on ethnic or state well-being. These are difficult assignments for the media but with dedication, much could be achieved.

The two main channels of communication are mass and inter-personal. It has been shown by communication experts that "local media–including local officials, announcements at local meeting and leaflets or jeeps with microphones, have both attributes interpersonal and impersonal." (Lin 1974:190). Therefore in choosing any, or a combination of the media–radio, television, films, printed materials or the inter-personal channels, it is necessary in determining the content and wording of the message to bear the following in mind.

(1) The audience to which the message is intended. We must decide whether we are concentrating on the entire audience in an area, its leaders, the educated or the illiterate or both or some combinations of these.
(2) What is intended to achieve such as creation of general awareness of the census, detailed information, or motivation to undertake the census enumeration and reassurance of government's intention.
(3) How long the message should stay before the audience, and the cost.

Another important factor is the availability of the various media. For example, using television has many advantages, however, it is more accessible to the urban dweller than the rural population. Therefore, for the urban population, television, radio and public rallies are vital, whereas in the rural areas, transistor radios and public rallies and whispering campaigns are most adequate. The major need in my opinion is to furnish adequate information to the people who are uninformed but interested. For this, more emphasis should be placed on the administrative and organizational aspects of census taking. If there is one deficiency in this field that is more serious than the other, it is not lack of adequacy in persuation techniques, but a general lack of adequate implemental machinery.

How Much of Publicity or Communication

It is difficult to establish how much communication is needed for a population census exercise. We can safely say however, that frequent accessibility to sources of relevant information through impersonal and interpersonal communication to the grass root'slevel is of absolute importance. Our public enlightenment efforts should first be directed to government officials in an effort to overcome what Berelson calls *bureaucratic timidity.* Here effort is directed to persuading the government officials to have clear-cut or well-defined policy towards demographic statistics; getting the true demographic situation and its implications brought to the notice of responsible government officials. To this end therefore, the apathy towards data collection and storage which is so obvious among officials must be highlighted and discouraged by the media. Public presentation of the facts showing both how essential census enumeration is to the nation's future and the citizenry to co-operation in a successful enumeration.

Another function of the media or enlightenment effort is to act as a legitimator and sources of knowledge. Although people should be allowed to take decisions on matters affecting the census and their own welfare, such decisions should be based on good and full knowledge. The media or public enlightenment effort should be directed to providing this knowledge. In addition, the media effort should be directed to legitimizing the census, disabusing the minds of the people that the census has anything to do with taxation. The job here is to develop the perception of social support for census enumeration. In another vein the public enlightenment efforts should be directed at combating what sociologists refer to as "pluralistic ignorance". In this regard, the media can campaign effectively against the tendency of people leaving their usual places of residence for their villages for the census count, simply because others are doing so or because their political mentors or tribal union leaders want them to do so.

Public Enlightenment

The crux of the matter is that in Nigeria population enumeration is politics, and those who hope to reap a political windfall will leave no stone unturned in order to achieve their inordinate ambition. The greater task facing the public enlightenment efforts is to ensure that this group of people do not have their way. In this regard, we call on the Population Commission to establish a Press, Publicity and Public Enlightenment Council or committee to monitor the activities of political trouble makers and expose them to the glare of public opinion. In addition, the committee should be a clearing house for news and information on census events. We make this suggestion in view of the latent dysfunctional effect which an otherwise well-intentioned news material could have if not properly handled. For example, in the 1962 census, a news item indicated that certain fishing villages were discovered during the census. The news item was supplied by a senior official of the Eastern Nigeria Ministry of Information and was found to be correct because these people in the fishing villages proved illusive to tax officials. However, when the discovery of the fishing villages was announced, it raised a lot of eye-brows and even today, people derogatively refer to the discovery of the villages during the census. If a press council or clearing house had existed, this news item would have been thoroughly analyzed, and probably withheld or tailored to suit the mood of the times. The committee should also ensure that census materials are translated into many Nigerian languages.

In general, the Press Council should be established in the federal, state and local government levels each to be charged with specific responsibilities in answering various questions about population census. In this regard the following functions must be highlighted.

(a) Creating general awareness of what the census enumeration is all about, and eliciting the co-operation of the citizenry. This could be done via television and radio discussion, and public address systems. One simple message so simple that it could be repeated over and over again by all media in different languages and easily learned even by illiterates, yet carrying the whole essence of the campaign.

(b) National press, radio and television programmes should be geared towards making the census a legitimate exercise. Government support and prestigious Nigerians should be invited to give talks and hold discussions on the issue. National census programmes should use personal or individual rather than collective appeals in advocating the census to the general public. They should talk of planning for individuals, enough food to go round thus creating individual happiness, not group or ethnic happiness.

(c) Population and census information should be made available to elites and leaders. Such information should stress national ideals, or collective interests. National leaders and policy makers are expected to be concerned with the effects of poor census records on national economic planning. The preferred media may be personal talks, letters or reports on what the census means to national prestige. Basically, at the outset of the campaign, the main audience is usually this group of people – the leaders who have it on their power to make national policy.

(d) Finally, census enumeration could be ruined by poor and inefficient field enumerators. Therefore, such enumerators must be very well trained and equipped with best materials and be supported by demonstration equipment. The public enlightenment messages should be so couched as to be a constant reminder to the enumerators as to what the nation expects of them.

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10

Acceptability of an Accurate Head Count: The Need for a Public Enlightenment Programme

S.O. Adekanye

Introduction

TWENTY years of post-independence controversy on population figures has tainted Nigerian thinking on census taking. The disbelief and confusion which has followed the various announcements of the total number of people numerated during each census has always diverted our attention from a detailed analysis of the returns. This uniqueness in our experience of census taking is due largely to the use of the figures for revenue allocation and the sharing of parliamentary seats, both of which are not unique to Nigeria. The controversy has always been aggravated by the use of data not properly evaluated in the computation of rates. This practice could result in a rejection of the next accurate census unless there is a general awareness on methods of evaluating the existing demographic and administrative records.

Censuses were taken in Nigeria in 1866, 1868, 1871, 1881, 1891, 1901, 1911, 1921, 1950, 1952/53, 1962, 1963 and 1973. The pre-1911 censuses were restricted to Lagos and its environs while the 1911 census marked the beginning of national censuses. Because of the Second World War, there was no census in 1941. The 1952/53 census was taken at different times throughout the country: Northern Nigeria–between May and July, 1952, Western Nigeria–between December and January, 1952; Eastern Nigeria–between June and August, 1953. The 1962 and 1973 censuses were cancelled because of the political acrimony which the censuses generated, while the 1963 census which is still used as the official figure today was accepted after a legal battle.[1]

The concensus of opinion is that the pre-independence censuses underestimated the population, while the census taken after independence were inflated. Reasons for the underestimation in the pre-independence era include poor quality of census staff difficulties encountered in enumerating the nomads and women in purdah, transport and communication problems, handling of census operations by administrators rather than demographers, unfriendly attitude of the people who resisted being counted because of

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* Ministry of Economic Development, Ilorin, Nigeria.

taboos or the association of census with taxation, inadequate fund and basing many of the estimates on faulty records,–such as tax records which, apart from being faulty, suffer from sex ratio and proportion of adults to total population assumed. The population recorded for these earlier censuses are shown in Table 1.

Table 1 Distribution of Population Nigeria Census

Year	*North 000 s*	*% of total*	*East 000s*	*% of total*	*West 000 s*	*% of total*	*Lagos 000 s*	*% of total*	*Nigeria 000 s*	*% of total*
1911	8,120	50.6	4,500	28.0	3,360	20.9	74	0. 5	16,054	100.00
1921	10,560	54.4	5,100	27.3	2,950	15.8	100	0.5	18,720	100.00
1931	11,440	57.0	4,550	22.7	3,940	19.6	126	0.7	20,056	100.00
1953	16,835	55.4	7,215	23.7	6,085	20.1	267	0.8	30,402	100.00
1963	29,809	53.4	12,394	22.3	12,802	23.1	665	1.2	55,670	100.00

Source I. I. Ekanem, *The 1963 Nigerian Census A Critical Appraisal.* Ethiope, Benin City, 1972.

Even though the organizers of the 1952/53 census claimed 95 percent, 97 percent or over and 97 percent accuracies for Western Nigeria, Northern Nigerian and Eastern Nigeria figures respectively,[2] evidence abounds to show that not so high a degree of reliability should be placed on them.

In respect of twelve districts in Ilorin Province, the census figure was 94,000 less than the figure obtained during a tax count conducted in 1951, while the over estimation detected in Degema (first count – 133,490; recount – 76,393) are not likely to be restricted to these two areas alone. Okonjo advanced several reasons to buttress his claim that the 1952/53 census could have underestimated the population by as much as 20 percent in some parts of the country.[3] There is a suggestion that there could be double counting of seasonal migrants of Northern Nigeria origin resident in the West who must have been counted in the North between May and July, 1952 and re-counted in December in Western Region.[4]

Evidence of undercount was provided by Ogunlesi who showed that there is no record of populations in the 1952 census for villages surrounding Igbo-Ora, Eruwa, Lanlate, Tapa-Aiyetoro, Igangan and Idere all of which are known to have been in existence long before 1952. Adegbola compared urban centres (i.e. those with 20,000 or more inhabitants) recorded in 1952/53 with those recorded in 1963, and discovered that some settlements which were described as rural in 1952 were now urban–evidence of under count in the 1952/53 census or over count in 1963. Additional evidence of under-count of children was provided by the fact that when the 1952/53 census was used to estimate the population of pre-school children in Western Nigeria in 1955, 392,000 children were found instead of the estimated 170,000.

Various levels of undercount estimated for the 1952/53 census include the following: Ayeni – 21 percent, Olusanya–18 percent[6] Ekanem – between 10–15 percent. Lorimer casually speculating about the 1952/53 and 1963 census reflected that" . . . the consensus of informed opinion is that the 1952/53 count was a substantial understatement and that the count in 1963 was at least 10 percent too large".[8]

The campaign mounted for the 1962 census stressed the use of the census figure for sharing amenities and representation in the house of parliament. People deserted the big towns to be counted in their villages, while some who could not travel like one clan union, sent a list of members of the clan resident in the township for inclusion in the census document for their village. Refusal of entry into purdah quarters and the example of these dishonest clan leaders has shown that the rule of counting by sight was not adhered to. The discovery of a village with 20,000 people "which has never been registered for parliamentary elections" and another fishing village of 1,000 people which was omitted in 1953 in the heat of the census campaign are pointers to some of the attempts to inflate the figures.

The controversy which followed the 1963 census was a result of inflation of almost the same magnitude as the 1962 census. Enumeration was done in market places, motor parks, railway stations, and at crowd pulling events, such as festivals, naming ceremonies, birthdays, funerals and sporting activities. Some census areas selected for sampling were disclosed long before the enumeration, while some enumerators lacked knowledge of the area in which they have to work, and were not proficient enough in the language to communicate effectively with the people. They therefore could not determine if previous census figures in the area had been inflated.[10]

The 1973 census also exhibited many patterns of errors as revealed by the scrutiny of some enumeration areas (E.A.) batches from the census returns of each state.[11] They include:

(a) Inadequate coverage in few cases
(b) Addition of extra households which were not found during the house listing exercise.
(c) Inflation within households on a wide scale by filling vacant rows of census questionaires, erasing summary figures on the questionaire and replacing them with the adjusted figures while the original figures could be seen. The added names were in a different style of writing while names and signatures of the enumerators were in a different style of writing on the added forms, in some cases, there were no names or signatures on the added forms.
(d) Inflation within households resulted in an unlikely frequency of households with 8, 15, 22 etc., persons.
(e) The percentage of maximum line households were high.
(f) Household population seems to have been padded by inserting unusually large numbers of visitors, strangers, guests, in-laws, co-

tenants houseboys etc.

(g) People were enumerated at their work places, suggesting a high probability of double counting.

(h) In a number of cases, it appeared as if the field enumerators had made addition or adjustment to the original work.

The post enumeration check which followed the 1973 census was not better either.

Such then were the patterns of errors in the censuses conducted in Nigeria after the middle of this century; gross undercounts in the 1952/53 census and gross overcounts thereafter. Yet because these are the official figures, the public will use then in the computation of rates without adequately evaluating their accuracy and arrive unfortunately at some erroneous conclusions. We shall argue in this paper that unless the public is conversant with the evaluation of census figures, the next census will be rejected even if it is accurate. The major reason for this is that if the 1963 census figure is used as a base to calculate growth rates, the intercensal growth rate implied by the next accurate census may not be plausible because of the overcount in 1963. Becuase the level of inflation was not uniform in 1963, the distribution of the rates amongst the states would be different from expectation in the light of our knowledge of the states. It may be necessary to prepare the mind of the public for these erratic intercensal growth rates which would be obtained by using the 1963 figures and the next accurate census.

Methods of Evaluating Demographic Data

The sources of numerical error in population data are: defects of data, chance fluctuations or errors due to sampling, and errors due to computation. Errors due to computation (e.g. rounding off) are usually very small and can be controlled by some simple precautions while chance fluctuations are usually not large in demographic data because the population considered is normally large.

Defects of the original data demand and are normally given the most attention. These defects are often large, hidden and irremediable.[12] They fall into two main groups namely: errors of content (resulting from incorrect recording or reporting or failure to report the characteristics of people who are included) and errors of coverage (resulting from persons being missed or counted more than once).

The method of testing these errors is simply to compare two or more sources of demographic statistics and see whether or not they agree or whether any resulting rate confirms with known characteristics of the population under study. Agreement or disagreement is not conclusive and does not indicate that the data being examined is without fault since any of the sources could be subject to defects, such as inflation of the same order at two succesive censuses may give a plausible intercensal growth rate.

The methods of measuring errors of content and coverage of census data include re-enumerating a sample of the population covered in the census, comparison of census result with data from independent sources, demographic analysis, and the evaluation of the procedures adopted in gathering the data.

Detailed evaluative studies of past Nigerian census have been done by many Nigerian demographers. In most cases, such research work has been confined to national and international demographic journals and publications which the common man may not have access to or may not be interested in. Such evaluative studies ranged from very complicated methods of estimating some rates to simple precedures easily understood by all and sundry. Members of the public have used some of the simple techniques to draw some erroneous conclusions in the past. We shall discuss how lack of proper evaluation of available population statistics has affected Nigeria's demographic history.

(1) Demographic Analysis

Census report can be subjected to demographic analysis for evaluation. Statistics from successive censuses can be compared, for example comparing one cohort indentified in one census and the next census, calculation of rates and ratios, analysis of the consistency of census statistics on births and deaths, and analysis of census data for internal consistency and reasonableness. One can also examine the distribution of the population totals for geographic or administrative units like states, local government areas or examine intercensal growth rates.

In Nigeria today, most of these methods cannot yield any meaningful result in the estimation of errors in total numbers which were responsible for the past controversies. Errors of content, for example, misreporting of ages has distorted the age distribution so extensively that erratic age distribution could usually be explained by poor age reporting rather than selective omission of certain age groups. Errors of coverage also affected the 1952/53 and 1963 censuses and in the two cases the errors were in opposite directions (undercount in one and inflation in another), thus limiting the use of comparing a cohort in one census with the survivors in the other, apart from the limitation imposed by the broad age groupings used in 1952/53 census. In the absence of a vital registration system, births in the year preceeding a census can also not be used to estimate undercounting of children aged less than one year.

Following the cancellation of the 1973 census no other useful information was published on it. Many of the methods of analysis enumerated above are complicated and cannot easily be understood and interpreted by a non-technical mind. For these reasons and the fact that the data available can be used in the published form, the comparison of total numbers by region or by state and the percentage increase had been extensively used by politicians and in many cases without an evaluative study of the figures. This had led, inevitabley to many erroneous conclusions. In particular, the use of intercensal growth rates without evaluating the accuracy of the figures used in their computation has aggravated the census controversies. When a growth rate favours a particular area, politicians from the area have always acclaimed the figure, while/politicians from areas which exhibited low intercensal growth rates have always been more critical of evaluating the accuracy.

The distribution among the states of the 1973 figures, and the range of annual growth rates obtained for the period 1963–1973 was responsible for the fiasco which followed the announcement of the provisional figures of 79.76 million for the 1973 head count. Table 2 shows that the intercensal growth rates between 1973 and 1963 vary within regions from 5.2 percent in Eastern Nigeria, to 9.1 percent in Lagos and varies in the decade 1963–1973, from – 0.6 in Western State to 6.8; in the North Eastern State.

A member of the supreme military council has commented that "The figures are very provisional but I can say that the 1973 count was probably the most thorough head count of human beings by human beings any where in the world".[13] Another member of the Supreme Military Council also described the 1973 census as "The most realistic and thorough population head count ever conducted in Nigeria" He confirmed that the procedures devised and put forward by the census board were meticulously implemented in the field during the head count exercise".[14]

The New Nigeria of May 10, 1974 carried an editorial which contains the following comment: "Members of the census board, the staff and traditional rulers should be complimented for their untiring efforts in ensuring the success of the exercise. The arrangement by the Board with the co-operation of the army, the police and the public ensure that people were counted only by sight."

The Daily Sketch Editorial of May 10, also condoned the figures. It noted that provisional figures were normally within 2 percent of the final ones and that the announcement of the provisional figures by the Census Board is a sign that the board had no genuine doubts about it. The paper however, favoured a trimming down of the figures for national unity.

One of the first critics of these figures was not happy with the above comments.[15] He gave four reasons why the provisional figures should be rejected.

In the first place, the 1963 census exceeded the United Nations estimate by 9.34 million while the 1973 provisional figures exceeded the United Nations estimate by 20. 40 million. He concluded that if the 1963 figures are nearest the turth, then the 1973 figures are farthest from the truth.

Secondly, he observed that inter-regional movements showed that the South was gaining steadily at the expense of the North during the intercensal periods of 1931 to 1953 and 1953 to 1963. In 1931, the population

Table 2 Population Census 1952/1953, 1963, 1973

STATE	1952/53 Census (millions)	1963 Census (millions)	1973 Census Provisional (millions)	Percentage change 1952/53 1963 (%)	Percentage change 1963–73 %	Annual Growth Rate 1952/53–63 %	Annual Growth Rate 1863/73 1973 %
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
North East	4.20	7.79	15.38	85.5	+97.	+6.18	+6.80
Kano	3.40	5.77	10.90	69.7	+88.9	+5.29	+6.39
North West	3.40	5.73	8.50	68.5	+48.4	+5.2	+3.94
North Central	2.35	4.10	6.79	74.5	+65.6	+5.56	+5.04
B/Plateau	2.30	4.01	5.17	73.3	+28.9	+5.56	+2.54
Kwara	1.19	2.40	4.64	101.7	+9.3	+7.02	+6.59
East Central	4.57	7.23	8.06	58.2	+11.5	+4.59	+1.09
South East	1.90	3.62	3.46	90.3	+4.4	+6.44	0.45
Rivers	0.75	1.54	2.24	105.3	+45.	+7.19	+3.75
Western	4.36	9.49	8.92	117.7	+6.0	+7.78	–0.2
Mid Western	1.49	2.54	3.24	70.5	+7.6	+5.33	+2.43
Lagos	0.50	1.44	2.47	188.0	+71.5	+6.05	+5.44
Nigeria	30.41	55.66	79.76	83.0	+43.3	6.05	+3.60

Source: Nigerian Herald,

Table 4 Projected Population of a Hypothetical State

Levels of Over count in 1963 %	*No. Enumerated in 1963*	*No. expected to be enumerated in the year when head count is accurate*				
		1973	1983	1993	2003	2013
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	1,000 000	1,280,085	1,638,616	2,097,567	2,685,063	3,437,108
10	1,100,000	,,	,,	,,	,,	,,
20	1,200.000	,,	,,	,,	,,	,,
30	1,300,000	,,	,,	,,	,,	,,
40	1,400,000	,,	,,	,,	,,	,,
50	1,500,000	,,	,,	,,	,,	,,

Note:- 2.5% annual growth rate was used to project the accurate 1963 figure.

Table 5 Implied Average Annual Growth Rate

Levels of Over count in 1963 (%)	*Implied Growth Rate when headcount is accurate*				
	1963-1973	1963–83	1963–1993	1963–2003	1963–2013
0	2.5	2.5	2.5	2.5	2.5
10	1.5	2.0	2.2	2.3	2.3
20	0.6	1.6	1.9	2.0	2.1
30	0.2	1.2	1.6	1.8	2.0
40	0.9	0.8	1.4	1.6	1.8
50	1.6	0.4	1.1	1.5	1.7

of the North was 58 percent of the total for the country; in 1953, it was 55 percent, in 1963 it was 54 percent. He endorsed this trend on the grounds that it was natural and normal, with respect to the economic and social circumstances of the country. However, even though he enumerated reasons why the 1931 and 1952/53 census were underestimates, he failed to state the degree of under count in each region for each census. One therefore wonders why he places so much reliability on them to the extent that he used them to study trends.

He frowned at the reversal of the trend whereby the 1973 provisional figures showed that the population of the north was 65 percent of the national total—and this in the absence of an undercount in Northern Nigeria in 1963; and with evidence that inter-regional migration was in the north to south direction.

In the third place, he stated that the average population growth rate for Africa as a whole was 2.7 percent whilst the growth rates in West African countries range between – 1.9 percent and 3.0 percent. He detested the range of growth rates of between – 0.6% percent in Western State and 7.0 percent in the North Eastern State.

Fourthly, he noted that the provisional figures showed that the population of North-Eastern and Kano States alone is almost equal to that of the South put together, thus reviving the fear of domination by the North.

Another seasoned politician declared that" . . . there is no Northern Nigeria or Southern Nigeria, therefore there can be no domination by the North . . . There are 12 States in Nigeria and whether they had a population 20 million, or 2 million each state remained equal with the other within the laws of the country."[16]

One commetator drew the attention of the nation to the population explosion experienced in developing countries in recent time.[17] He gave examples of countries which had growth rates above the 3.6 percent observed for Nigeria in the intercensal period 1963–1973. Within the 1963–71 period, some of the countries he cited are: Kuwait (9.8 percent), Bahama Islands (4.6 percent, Brunei (4.6 percent) EI Salvador (3.7 percent), Algeria (3.5 percent) which are also UNESCO'S estimates.

He argued that those who called for the cancellation of the provisional figures did so because the figures did not favour their states. It suffices to state here that there is a need to know the history of a country before taking at face value indices copied from international journals. He used the percentage change and annual growth rates within the intercensal periods 1953–1973 and argued that growth rates were high generally in the 1953 – 1963 period, but rates for the South are higher with Western State having a rate of 7.8 percent second only to Lagos, while most northern states had growth rates below the national average of 6.0 percent. The north had a growth rate of 5.7 percent per annum, while the south had a growth rate of

6.5 percent within the period. He stated that the population pendulum moved to the north in 1973 because of the following reasons:

Firstly, he said that the *law of large numbers* states that when two populations are exposed to expansion; the large experiences greater expansion, the north being consistently larger experienced larger expansion. It appears as if rate of growth and absolute numbers are being confused here.

Secondly, he claimed that the 1973 census did not allow mass movements so that southerners in the north could not travel home. And because there are more southerners living in the north than the northerners in the south, this large movement has always been greater southwards. If this was true, one would add that northerners in the south did not travel home. This contradicts the assertion of the commentator mentioned earlier. Evidence abounds however, to show that there was mass migration during the census. The North Eastern State Commissioner for Economic Planning and the Emir of Katsina complained that many migrants left the area for their home states to be counted.[18] As stated earlier, there is a need to study inter-state migration in Nigeria.

Thirdly, he argued that monogamy and the practice of birth control in the south, with about two or three children per family, and the north with polygamy and a family size of between five and twenty children would be partly responsible for this shift of population pendulum.

It appears as if family size was related to women in the case of the south and to men in the case of northern Nigeria.

Polygamy could depress martial fertility. Seventy-seven percent of the wives with no education, 21 percent of those with lower primary and none of those with secondary education and over were polygamously married in rural Eastern Nigeria in 1973.[19] While the same trend was found by Olusanya for Western Nigeria.[20] Moreover, momogamously married women were found to be more fertile by Ukaegbu.

The use of family planning methods other than abstinence was entirely limited to the small number of women with urban residence and higher socio-economic status.[21] Only one-sixth of Ibadan women (the second largest town in Nigeria) had used modern contraception by 1973, Caldwell explained that the reduction of fertility is far from being the primary aim of contraception in Ibadan. Even among women with secondary education, only 55 percent of those with five surviving children want to prevent further births. Ohadike also showed that women who marry late and mainly because of education, caught up by age 35 with the uneducated wives who married early.[22] Mean births of women aged 35 years and over were distributed as follows in Lagos in 1963: white collar – 6.5; traders – 6.1; crafts and others 6.2; no occupation – 5.9? In the light of the above, earlier estimates of fertility would therefore not have changed much in the south as suggested by the commentator. Etienne van de Walle's estimate using the age distribution of the 1953 census did not show any marked difference between the south and the north, and in most provinces, the gross reproduction rate was over 3.0 [23]. The estimates of total fertility obtained by Coale and Lorimer showed that this rate is above 6.0 for all except one province in the south and this was lower than 6.0 in seven out of the twelve provinces in the north.

None of the arguments put up by this commentator on marriage and fertility reduction as a result of contraceptive use could therefore account for the negative growth rates and excessively high growth rates suggested by the provisional figures in the 1963–1973 era. Moreover, a decrease in absolute numbers with what we know of these states.?

Fourthly, he stated that some states received a lot of migrants from drought striken neighbouring countries.

A Commissioner for Finance also attacked critics of the census and described it as the most acceptable of all census figures for this country. He drew attention to the fact that the rate of growth for some states between 1953 and 1963, was higher than that of his state between 1963 and 1973.[25]

Such were the uses to which the intercensal growth rates were used in post-independence Nigeria. While many of the observations were right, some of the conclusions were due to improper evaluation of the figures which were used to compute rates. The degree of undercount in 1953 and the degree of overcount in 1963, estimated by various demographers are to a large extent, confined to demographic books, while the non-uniformity of the estimates. could act as additional disincentive to the public who want to know one and only one figure (but not a range) as the population of an area.

This notwithstanding, there is a need to enlighten them on methods of evaluating available demographic statistics and to inform them that government acceptance of these figures is no guarantee of their accuracy. While I am not advocating any press war, there is need to refute some misleading conclusions obtained from inadequate data, particularly, if such statements caused general public apathy. Local dailies should be used so that such refutation would receive the same circulation if not the same prominence. Simple lectures on demographic statistics relating to collection, analysis and detection of errors should be organized on T.V., Radio and in the dailies. If they are aware of the inadequacies of the data, they would attach clauses to some of the statements above.

The Range of Growth Rates Obtained for the Period 1963–1973

The range of annual growth rates of – 0.6 percent in the Western State to 6.8 percent in the North-Eastern State, obtained for the decade 1963–1973, is out of tune with known characteristics of Nigeria. It is not that some countries have not experienced growth rates of these magnitudes. Ireland for example experienced growth rates – 11-6 percent, 4.3 percent– 1.8 percent, and 5.6 percent and 6.4 percent in the periods 1881–1890, 1926–

1936, 1951–1956 and 1956–1961 respectively'[27] while Isreal had a growth rate of 11.6 percent in the period 1948–1955. The negative rates obtained for Ireland resulted from a high rate of emigration. One could not compare 1963–1973 Nigeria with 1930 Ireland when for the latter, one quarter of each cohort of Irishwomen and one third of each cohort of Irishmen remained single throughout their life-time, nor could one think of such high emigration rates in the intercensal period.

While the very high growth rates obtained for some states in the period 1953–1963 and 1963–1973 are not unexpected on the basis of the undercount in 1952/53 census and the inflation of the last two censuses. The negative growth rates obtained for some states are disturbing. Reasons for these negative rate could include lack of interest in getting counted, a high census emigration rate, an over count in 1963, and a near accurate head count in 1973.

In the light of past census experience in Nigeria, it is doubtful if people, in a particular state would show no interest in the 1973 census. Unfortunately, no data on migration has been published in any previous census, and in the absence of adequate data on inter-state migration, it would thus be difficult to know whether the degree of census migration could account for a negative rate in these states.

Bearing in mind that there is rivalry between towns not in the same state[29] since population is always the same state, not all areas migrations would be inter-state movements. Looking closely at the patterns of errors reported for these states in 1973, it is seen that the sampled E.A. batches exhibit most of the patterns shown by other states.

Such were the patterns of error in 1973, in states with negative intercensal growth rates during the intercensal period 1963–1973. Overcounts and undercounts could be working hand in hand and it may be difficult to know which is higher.

We shall argue that if a state was overcounted by a wide margin in 1963, and if an accurate census is taken before the year 2013, the observed annual growth rate between 1963 and the year when accurate head count is taken would not seem plausible.

To illustrate this, we shall consider a hypothetical state with a population of one million in 1963. The enumerated population of this state, under various levels of overcount in 1963 is shown in column 2 of table 4. The number expected to be enumerated in the year when an accurate head count is achieved is obtained by projecting the *accurate* 1963 figure of 1,000,000, using 2.5 percent annual growth rate.

Table 5 shows that if a state was overcounted by 10 percent in 1963, the intercensal growth rate between 1963–1973 would be 1.5 percent, if there was no overcount in 1973. This rate would not look plausible for any state and this can lead to a suggestion that the state was undercounted in 1973.

If a state was over counted to the tune of 40 percent in 1963, a negative growth rate of – 0.9 percent would be obtained for the intercensal period, if the 1973 census was not inflated. In this situation, the growth rates implied by any census taken before 2013 would never look plausible and the affected states may find them unacceptable. The higher the level of inflation in 1963, the less plausible would be the intercensal growth rates. There is a need to prepare the minds of the people for these low or near zero growth rates if the next census is accurate. Of course, should it suffer the same level of overcount as the 1963 census, then the rates would be acceptable and so also the census figures.

2. Comparison with Administrative Records

The accuracy of census returns can be tested by an overall comparison of the results with data from independent sources, usually administrative records such as schools enrolments, tax lists and voter lists. Census documents can also be matched with other documents for the same person, such as sample surveys. These cross checks have not been used in Nigeria today.

Organizers of censuses conducted before the middle of this century relied heavily on the use of tax records to estimate the population of subsections of the country. The inaccuracies in the use of tax records for estimating the population have been discussed earlier. For the 1931 census, 96 percent of the indigenous population of Northern Nigeria and 98.8 percent of that of Southern Nigeria were obtained from tax records. [31] Thus, instead of using tax records as a means of evaluating census statistics, they were used in estimating the population of the country. Apart from the 1952 census, where for example, an undercount was detected in Ilorin Province on the basis of the 1951 tax records, not much information was published on their use in evaluating census statistics.

A total of 48,433,757 Nigerians aged 18 years and above registered for the 1979 elections. This number implied that the 1978 population of Nigeria was around 96 million, and it has been suggested in some quarters that the 1963 census undercounted the people.

It would be noted that the population aged 18 years and above in 1978 were the survivors of those aged three years and over in 1963, that is the survivors of 50,265,000 people, leaving the over count in 1963. (The population aged 3 + in 1963 were 18+ in 1978). The survivors of this cohort in 1978 was estimated using Brass Model Life Tables.[37] The 1963 population was smoothed using two–parameter Model Life Tables: expectation of life at birth of 40 years (mortality level 40) for both sexes and a gross re-production rate of 3.2. This population was projected to 1978 using 5–year survivor-ship ratios from the one parameter system, mortality levels 40,45, and 50 for 1963, 1968, and 1973 respectively. Age splitting coefficients were used to obtain the population aged 18 to 19 years in 1978, that is the survivors of the cohort aged 3–4 years in 1963. The population aged 18 years and over in 1978, was on this basis, estimated to be 34, 507,166.

This is 12,926,591 or 37 percent less than the number of registered voters. Even though this looks high, the patterns of error reported for the 1973 census, suggests that an error of this magnitude is not impossible in Nigeria.

In the report of that census, the population of many households in the sampled E.A. batches were more than doubled. If the overcount in 1963 and the fact that not all eligible voters would register in 1978 are taken into consideration, the number of people registered should be expected to be less than this figure lending support to the fact that the number of registered voters was inflated.

Oyediran and Arowolo, using the mid-1978 estimate of 80,563,200 by the National Population Bureau, estimated that the registered voters represented 60.4 percent of the population, implying that those aged under 18 years are 35.6 percent of the population—an unlikely age distribution for Nigeria and an exageration of the number of eligible voters. They estimated a voting age population of 41.3 million, and concluded that since not everybody of voting age would register, the voters' list was falsified, and that the turn out at the 1979 elections was not as poor as Fedeco's estimate suggested.

One cannot but endorse their statement that "misconceptions about the seeming apathy of the electorate during the 1979 elections arose from demographic misinformation".[34]

Adewuyi compared the age distribution of many African countries and used 54 percent, 49 percent, and 45 percent respectively for this high medium, and low projections for the proportion of persons aged under 18 years: On the basis of these assumptions, his three estimates of the 1978 population of Nigeria implied by the voters' list are 103, 166, 860; 95, 007, 363; 86, 243, 196 or an average of 94,122,473. These estimates were much higher than existing estimates of the 1978 population, and Adewuyi thus concluded that the voters' list was unreliable.[33]

Another important source of evaluating census statistics has therefore failed woefully.

3. Evaluation of Procedures

The last point to be considered in this paper is the adequacy of the procedural rules used in gathering and compiling the statistics, the organizational arrangement for administering them and the extent to which they were followed. The 1973 census was well planned, and the commendations referred to earlier would apply more to the planning than the execution.

The report of the 1973 Nigerian census revealed that some census officers displayed state loyality rather than the national interest. The history of census taking had been such, that Nigerians no more trust each other when it comes to this aspect of national service. Of recent, there has been a call for the importation of foreign experts to help us count ourselves. The psychological satisfaction that an outsider who has no vested interest in our census figures is incharge, may effect the acceptability of any future census.

This thinking can be worked upon by making the state offices of the National Population Commission as heterogeneous as possible, and moving the heads of states offices to states other than their states of origin for the period of the census. This would add to the cost of the census exercise, but it is worth a trial, moreso that the level and patterns of error as revealed by the scrutinized E.A. batches, suggested that the inflation had the backing or blessing of some top state officials. During census operations, statisticians from the Federal Office of Statistics and State Ministries of Economic Development should be deployed as field editors to states other than their own, while the exercise should be viewed entirely as a federal exercise.

Summary

This paper has reviewed some methods normally used by the general public in evaluating census data in Nigeria. These include an evaluation of the organization and execution of the census procedures, the comparison of administrative records and the computation of rates and ratios for subsections of the population. The conclusion was reached that Nigeria excelled in organization but not in execution of post-independence censuses because of deliberate inflation. The call for greater participation of foreign experts during our censuses is due to lack of commitment to a national cause by many past census officials.

Most available administrative records are faulty and are not suitable for evaluating census statistics. Unfortunately, some people who believed the records, have used them to evaluate population statistics.

Growth rates computed from two inaccurate censuses are bound to exhibit unusual features. Yet these have been used in Nigeria to aggravate census confusion.

While Nigeria is aiming at an accurate census within the nearest future, there is need to aim at an acceptable census. To achieve this, public enlightenment on methods of evaluating census figures and records which these figures could be compared with should be pursued. The radio, T.V. and dailies should be used in achieving this aim. Public interest and awareness on census issues has increased in recent times, and this aim will not be difficult to achieve.

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11

The Philosophy of Census: Theory and Practice in Nigeria

Olukunle Adegbola

Introduction

A LOT has been said in the press and in serious academic journals to emphasize the heightened public concern over the country's inability to conduct a successful, creditable census that will command both national and international acceptability. The government, on its part, has not been idle in attempting to take decisive action to improve the quality of our demographic data, particularly those derived from the census. In 1975, it established the National Population Bureau to take charge of the demographic aspects of the country's statistical system. This step has removed one major obstacle to conducting a successful census in at least two ways. First, the existence of the Bureau ensures continuity in census work while its permanency permits not only the development of specialized and experienced personnel, but also the maintenance of files of essential statistical and geographic information. Secondly, the bureau can, and does, undertake numerous demographic surveys that can provide some idea of the country's population profile and thus reduce the tension generated by the census.

Only recently, the National Population Commission whose functions are clearly defined by the Constitution was inaugurated with the principal responsibility for advising the government on detailed measures including legislation, necessary for tackling demographic problems, particularly the census.

With the coming into being of these two agencies, demographic statistics problems in Nigeria have moved closer to receiving the full national attention they deserve. What remains is for men of ideas to put forward their views as to how the country should proceed in tackling those problems. In articulating the problems, the natural starting point is an examination of the philosophy underlining the issues involved in those problems. What I propose to do in this paper is to discuss the scope of, and provide some conceptual frame for, census philosophy, examine the Nigerian situations in the light of the conceptual underpinning and finally suggest measures that will aid policy formulation to boost census philosophy.

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* *Dr. Adegbola lectures in the Department of Geography, University of Lagos, Nigeria.*

Scope and Concepts

The critical term used in the title of this paper should be defined so that its restricted perspective might be kept in mind. *Webster's New Collegiate Dictionary* defines philosophy as a body of principles underlying a human activity.[1] Applying the critical idea of this definition, the issue becomes a consideration of the rationale for, and the basic rules governing the conduct of a population census. The rationale, which can be summarized as the provision of the facts essential as a basis of governmental policy and administration, together with the basic rules which include sponsorship, defined territory, universality, simultaneity, individual unit and compilation/publication are well set out and fully discussed in a United Nations document[2].

Of these principles, two universality and individual unit, are of special significance for the purpose of this paper. Universality refers to the inclusion of every member of the community within the scope of the census without omission or duplication. This implies that while all the people within a household must present themselves for enumeration, no one should be counted more than once to ensure completeness and accuracy. The requirement of individual information means that separate data are to be recorded for each person enumerated in every household as opposed to a procedure by which summarized data are collected for a group as a whole. In practice, the head of the household or his accredited representative supplies the information for each member and he should be patient enough to give all the required information to the painstaking enumerator. It is in this way that detailed classification may be provided in all the required combinations during the period of analysis.

Since an understanding of these principles is critical to the success of any census, it is essential that the government, the officials and the people at large should be well acquainted with the rules. Government understanding of the principles is necessary to be able to create a conducive environment for accommodating the principles without unnecessary interference with the technical planning and execution of the Project. It is equally imperative for both the officials who are to handle the various census operations and the public from whom information is to be collected to be well informed of the principles so that each will know exactly what is required of him/her in the exercise. The degree to which societies can be made to understand the principles and faithfully follow the spirit and letters of the rules when understood depends to a large extent on how receptive that society is to such an innovation as the census and how well it can cultivate the required culture.

It is conceivable that every society in its formative years conducted the affairs of state without any census. In such a society, the counting of human beings especially freemen is contrary to custom. In the traditional belief and philosophy of such a society, a man could count that which is his own, for example, slaves, domestic animals, crops and other personal effects. Again, the counting of human beings is believed to cause death, since it reminds evil spirits that a particular kin-group had multiplied beyond a certain point and that the time had come to prune it. The problem of making such a society understand the census principles is to change the whole mental perspective of that society so that the individual is thereby released from the trammels of tradition. Once he has been cut from his moorings, he should be guided to take new bearings by proving to him that his objections to counting are entirely superstitious and have no basis either in theory or practice.

The experience of the individuals within the society during the process of demostrating the proof is critical to his future reactions to any form of counting. If the exercise is found either to be injurious to or to impose some burden on him, he will have the best of reason to find a census objectionable whatever its rationale. On the other hand, if an individual finds that, true to his expectation, the census yields him some advantage, be it economic, social or political, he is likely to embrace the census *per se* with fervour and metaphysical conviction without adopting the culture that goes with it. In trying to maximize the advantage, he may become over-zealous and not only present himself for counting more than once but also influence others to do likewise. In between these two ends of the continuum are various stages of census acceptability, the most important of which is the desirable point where the census becomes a familiar institution and its principles tenaciously upheld. Once the crucial breaking of the chain of tradition is effected, the individual is likely to move steadily towards the desirable point. The overzealous individual obviously passes this point and can return to it with proper re-education on census philosophy. However, movement from the origin to the desirable point is not completely reversible. An individual who reaches the desirable point because of some initial advantages, real or imagined, is most unlikely to return to the origin; at worse, he moves back a little to the point where he becomes indifferent to any census exercise.

Examining the Nigerian Situation

The above conceptual exploration provides a basis for examining Nigerian census philosophy. Precolonial Nigeria consisted of societies who had never been effectively counted, even though basic civil obligations which formed the rationale for census in ancient empires where census originated[3] were not unknown in these societies. Direct taxation was a feature of not only the Fulani and earlier Habe administrations but also of the governments of Bornu. In the Delta, direct taxation was, by tradition, levied by the Heads of

Houses[4]. Where direct taxation was not levied, financial obligations were rendered to native rulers in cash or kind during important festivals and as tributes by vassal subjects, while the imposition of tolls and market dues were undoubtedly a widespread means of raising revenue. Complementing these financial responsibilities were labour and military obligations. Communal labour was used to clear paths linking settlements and to maintain environmental quality, while the defence of one's fatherland against external aggression was the duty of all able-bodied men. These obligations were relatively simple and virtually unchallenged since they were compatible with people's culture, involving, as it were, no census which was considered wrong from a religious and on ethical point of view.

It was into this rustic socio-economic environment that the British introduced a rather sophisticated form of fiscal, labour and military obligations. The establishment of native treasuries in the true Lugardian fashion led to the imposition of, or increase in, direct tax with its unbearable economic burden on the people and to the introduction, with tremerarious disregard for people's convenience and dignity, of unpaid corvee for porterage as well as for the construction and maintenance of infrastructure. As for military service, it should be noted that although conscription was not the official British policy until the Compulsory National Service Regulations was introduced during the Second World War, recruits were obtained by false presentation as revealed by the report that recruits forcibly sent in by the Alafin in the 1910's deserted in large numbers.[5] Each of these obligations was preceeded by some form of counting which, unfortunately, was often effected by government officials using devious tactics, by licentious court messengers using brutal methods.[6]

The effect of these methods of introducing census was bound to be negative, following our conceptual construct. The people came to distrust the government and believing that any counting imposes one hardship or the other on them, disappeared into the bush as the alarm was raised of the presence of any government official and might be caught only after exhausting chase. Thus, throughout the colonial era, no rationale for census put forward by the administration had any magic appeal, even after 1921 when census was no more conducted with a "view to assessment of taxation".[7] In 1931, when the rationale for the census stressed the need for data to assess the mortality, morbidity and health of the people, the fear that census had always been used as a basis for measures detrimental to them prevented people from cooperating fully with census officials.[8] No assurance given by the government officials that the 1952/53 census was essential for national planning was quite sufficient to eradicate the fear of the people as revealed by the following quotations:

" . . . in more than one area the supervisor was asked to take a 'juju

> oath' involving his own life that the census had nothing to do with taxation".
>
> Last time we had a census, we were given medals to hand round our necks to show that we had been counted (a reference to the aluminium discs issued as tax receipts in the early days of taxation). Will we be given this time?
>
> The census, it was alleged, was for conscription for the Korean war, for forced labour or for the police . . . It was to compile a nominal roll of dancing girls for Europeans.[9]

For such a deep-rooted suspicion to be overcome, a new philosophy, stressing the advantages to be derived from a census was required. The explanation of the philosophy would carry weight if given by persons who people had learnt to trust, in the simplest words, reiterated over a period of months and all questions frankly answered. This is why extensive publicity involving local politicians and leaders of thought was launched in post-colonial census to stress that the rationale for census was mainly its utility in planning. Planning was interpreted to mean sharing of money for development, allocation of social amenities and political representation. With economic, social and political implications known, cooperation and assistance were freely forthcoming—but at a price. By bringing it home to the people what the census was likely to mean to their own villages, ethnic group or region, the philosophy enunciated thus intensified ethnic and regional competition which, in colonial times, often led to bloody affray. People, now seeing with reckless abandon and of course, there were very few ethnic groups which could resist such temptations.

The situation was aggravated by officials who, being at the point of direct contact with the people, strenously exploited their position to enhance the numerical importance of their ethnic group or state. The reality of the situation is clearly illustrated by the 1973 census which showed that there was little, if any, disposition on the part of the public to intentionally mislead the enumerators or to defraud. On the other hand, it clearly revealed that the gross-counting was a result of deliberate cheating of the officials, actively backed by the administrative leadership. There was abundant evidence that a large number of ghost households had been either recklessly added or padded with visitors and given in round figures; in one enumeration area, 72 of the 83 households were shown as containing exactly 20 people, 34 of these consecutively.[10] This type of down-right dishonesty was repeated shamefacedlessly during the Post Enumeration Check when, according to federal inspectors and non-local enumerators and supervisors, local officials not only loaded sample areas with people from outside and deliberately destroyed Enumeration Area (E.A.) sketches to enable them enlarge the EA but also threatened violence (including physical elimination) on the nonlocals if the reports and schedules were not signed. Yet, court cases arising from the census were non-existent. The abiding impression one has after the census is total abhorence of the evil machinations of officials who were well educated on the rationale and principles of the census and who were expected to preach the philosophy of census. It is clear, therefore, that the Nigerian society has swung to the other extreme of the theoretical continuum and future census philosophy should focus on how to bring it back to the desirable point of rectitude.

Towards a New Census Philosophy

It is against this background that the need for a new census philosophy should be viewed. To be sure, any philosophy formulated should embrace all the principles enumerated in section two above but it should, at the same time, reflect our recent experience at census taking. This experience dictates that some rather unconventional methods, some of them draconian, be injected into any strategy essential if we are to arrest the disturbing experience whereby census quality progressively declines despite superior techniques, administration and expenditure.

The first strategy is to make the general public participate in the formulation of the philosophy. Past efforts have seen philosophy from the point of view of an insider-officials who emphasize the utility of the census for economic and social planning. Although nobody denies these advantages at the macro-level, how census directly contributes to solutions of problems at the micro-level is not obvious. Yet, to the individual, such public advantages are by themselves of little value. What is important is the gratification he will receive in concrete, or specifically monetary, terms from such an exercise. Thus, although, he is most unlikely to resent the census, having passed the age of suspicion, he may be apathetic to the exercise. In other words, the individual may think in terms of criteria which are different from those accepted by officials and may thus conceptualize the philosophy quite differently. It is therefore desirable to get some insight into the forces that influence individual attitudes towards census exercises, instead of assuming that we know all that is good for him. In this connection the National Population Commission should do two things. First, it should demonstrate the concrete advantage of the census by issuing identity cards to every member of the household enumerated, stressing that the cards will be required by everybody for future administrative and legal transactions such as admission into schools etc.

Secondly, the Bureau should organize a survey in which questions such as the following are asked: What does the individual feel about census operations? To what use does he think census data are put? How will he want the census data serve his needs as presently perceived and derived? What does he think the country loses by not having an accurate census,? Answers to such questions are urgently needed to incorporate the average Nigerian feelings into a census philosophy.

The second strategy is to have a philosophy that will practically and effectively rather than rhetorically, depoliticize the census. There is now a far less favourable condition for preaching depoliticization. This is a period of keen political awareness when the bid for political power and recognition as a political unit either in form of a state or a Local Government Area is intense. Indeed, there seems to be a great deal of opportunism hidden behind the high-flown sentiments exhibited in the reckless demand for the creation of new states with utter disregard for the administrative cost of running the states. There is little doubt that the small ethnic groups or subgroups will strive hard to augment the number and importance of their groups to strenthen their claim to a state. In such a situation, it is likely to prove extremely difficult if not totally impossible to convince their leaders of thought that an inflated census will be harmful to the nation.

Therefore, I submit that our approach to the census should be on the basis of costs and benefits and the philosophy should be so designed. All along, the philosophy has laid disproportionate emphasis on benefits, financial and electoral representation, to be derived from a census to the complete neglect of any costs whatsoever. These benefits are, however, seen, not in terms of the Nigerian society, but in chauvinistic and parochial terms of ethnic or sectional components of the Nigerian nation. One can argue that the desire of any group to get ahead and be motivated by a desire to improve the condition of its members is instinctive, natural and indestructible and that although that instinct can be sublimated and regulated, it can never be obliterated. However, this irrepressible drive to improve the lot of the group has to be reconciled with the group's obligation to contribute to the general Nigerian welfare.

What policy needs do then is not just remove population factor from revenue allocation but create a framework that will make each state shoulder some national responsibility according to the size of its population. Two methods of achieving this end easily come to mind. First, a capital development fund can be established at the Federal level and contributions into it will vary directly with the population of each group. The machinery for collection, the agency to be responsible for the fund and the method of disbursement are details which a committee of experts should look into.

The second method is for the federal government to shed some responsibilities to any state that attains a given population. This implies a classification of states according to both population and federally-shed responsibility, but does not imply an infringement on the rights of the states to manage their own affairs in a truly federal system. What responsibilities should be shed, in what order and when, are issues for another committee of experts.

As for electoral representaion, it is unrealistic as it is being suggested in certain quarters, to make it independent of population numbers. Such a step will not only run contrary to the spirit of a federal system and democracy, but will go against a section of the Constitution which provides that apportionment in the House of Representatives shall be based on population.

What all these point to is that while the planning argument as the basic rationale for census remains inviolate, each state should know that an adjunct goal of a census is to determine its own contribution to the national pursue or the federal load it will carry in the near future.

Conclusion

The major purpose of searching for a new census philosophy is to ensure a successful census of which every Nigerian will be proud. While the need for an accurate census is not in doubt, it should be emphasized that a successful count is not a *tour de force* but the outcome of a sound administrative regime and the willing cooperation of the people. The foundation of the regime has been laid with the establishment of the two population agencies but the reorientation of the public requires some time. In seeking to reorientate the public and secure its cooperation, the agencies should of work on census in the school syllabus, organize conference of various users of census information starting from big multinational companies down to local government areas, seek the cooperation of professional associations interested in census problems and pursue a line of propaganda that will stress both the costs and benefits to be derived from a census. All these are meant to build up a climate of opinion favourable to a census in order to avoid a recrudescence of our past experiences. While this foundation is being laid, statistical data can be collected by other methods.

Even when the public has been made to feel the need for a census and a proper groundwork laid for an enumeration exercise, blitz tactics should be employed. The strategy should be to complete the census in one day so that the economic and social value of the information collected will justify the expenditure on the census.

The building up of a favourable climate of opinion should go *parri-passu* with the other measures advocated here, especially those which touch on the distribution of power between the federal and state governments and which therefore requires an ammendment to the constitution. It is realised that by its very nature, the suggestion will be surrounded by controversy from the start. Opponents of the measures should be made to realise that if the discipline and obligation necessary to be loyal to the Nigerian society is absent, it has to be imposed by unconventional means.

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IV

Discussion

EDUCATING THE PUBLIC ABOUT CENSUS

Four target groups were identified as important *educators* with regard to Census: policy makers, statesmen, politicians, journalists and other leaders of public opinion.

This group should be taught the relationship between accurate population data and developmental planning and the effect of not having accurate population data on public services such as NEPA, airlines, schools, water and traffic conjestion. Dangers of overcounting and undercounting should be analysed and carefully explained.

Information channels for this target group include: conferences, seminars, information bulletins, personal talks, letters, group discussions and reports on the uses and importance of a national census.

Top personnel of the National Population Commission: Chairman, Commissioners, demographers, computer personnel and administrators also need special briefing sessions where the relationship between accurate population data and development planning and also the effect of not having accurate population data are fully appreciated.

Enumerators, supervisors and other field staff must also be taught in a simplified way, the relationship between accurate population data and developmental planning, and also the effect of not having accurate population data. The logistics and mechanisms of the various tasks which this group has to perform will have to be taught through training courses, texbooks, and pamphlets. Finally, they should be polite honest, courageous and dedicated.

The public at large is the largest target group. This group should be made aware of the importance between accurate population data and developmental planning and the effects of dishonesty or evasiveness toward being counted should be clearly spelt out.

Information channels for this group will include: the introduction of population courses in all our schools, the use of mobile cinema, posters, newspapers, radio and television stations.

The following were also recommended:

(a) The Commission should try to establish an education unit.

(b) The Commission should come up with hand bills and pamphlets giving full details about the census and its importance.

SESSION V

Towards a Meaningful Set of Population Census Data

12

Statistical Optimization and the Census: An Alternative

Kesiena Agori–Iwe
and
Mustapha C. Duze

THIS PAPER attempts a three-part presentation on a possible alternative to the census.

(1) To establish the first acceptable census or population base, we propose the use of *multiple clustering* with double or repeated sampling. At least two separate organizations should cover the same cluster samples, but on different days or weeks.

(2) As an all-time check on the census (or an all-time alternative in the absence of an acceptable census), use filtering theory for projections. We sketch the mathematical proof of a resultant minimum mean square error of a filter with "white noise" input. (i.e. the best possible predictor.)

(3) The census is a complete enumeration of the population. If not complete enumeration, then what sample size is statistically 'adequate'? How much time and at what cost? We propose sequential analysis and optimal design techniques to answer these questions.

Introduction

Nigeria's history, census-wise, has been such as to generate a lot of skeptism regarding our abilities to hold a successful census. After three post-independence census activities, we are still in a postion where we know very little about the population of the country. Moreover, these census activities have carried with them so much controversy and explosive potentials that people now virtually dread the possible consequences of yet another one exercise. Given these conditions, the questions that emerge are (1) Can we

Dr. Kesiema Agori-Iwe works at COMPUTAMATICS Inc., 95 Ibrahim Taiwo, Bompai, Kano, Nigeria; Dr. Mustapha C. Duze lectures in the Department of Sociology, Bayero University, Kano

actually ever have reliable censuses? (2) What are the likely consequences of subsequent censuses? These questions of course have to be related to the cost of each census. If a substantial portion of our resources is to be diverted into a total head count, can we reasonably justify this kind of diversion knowing that the chances are high that the outcome will either be rejected or cause political unrest .

These considerations, briefly put, have occupied the minds of many of us in the recent past and have generated a lot of suggestions. These suggestions fall into two categories. The first group concerns ways of improving our census taking. These suggestions were made as a result of thorough considerations of the problems identified in connection with our past censuses and are addressed to ways of correcting or avoiding these past problems. Thus suggestions have been made regarding timing, organization, personnel, publicity and analysis of censuses. In essence, these suggestions are from those of us who believe that it is not only desirable but possible for us to have a successful census.

The second category of suggestions concerns the possible alternatives to the census or necessary supplements to the census. These suggestions have been prompted by a consideration of our past performances and the cost of census taking. Most of the suggestions in this category have been primarily concerned with outlining the alternative data collection methodologies such as sample surveys and vital registration with little or no emphasis on analytical techniques.

The aim of this paper is to suggest an alternative source of demographic information that could serve as either a check on the census or as an independent source in the absence of an acceptable census. The alternative suggested is the use of cluster sampling for data collection and the use of filtering theory for projections. The suggestion is based on the belief that there is the need for an alternative data source to the census at the national level. The treatment draws heavily on sampling theory and tends to be essentially statistical but fortunately the treatment here is elementary and it is hoped can be easily followed by the reader. It should be pointed out here that what is presented in the paper constitutes preliminary thoughts for discussion: a lot of detailed discussions have been omitted to allow for easy comprehension of the basic ideas. Finally, it should be mentioned that the suggestions here developed as a result of discussions between the co-authors in the belief that population is an area of interest to all social scientists not just demographers.

We start off with a brief introduction of cluster sampling as the most efficient source of the kind of data required for the analytical technique in mind. Then we go on to discuss the technique and end up with a discussion of optimum sample size and cost analysis.

Survey methodology

As Kish (1968;148) points out, "Clustering or Cluster Sampling, denotes methods of selection in which the sampling unit, the unit of selection, contains more than one population element, hence the sampling unit is a cluster of elements. Each element must be uniquely identified with one, and only one, sampling unit."

A country as vast as Nigeria is certainly not easy to cover in distance. Also, given the heterogeneity of the people, the culture and customs, the religion, as well as dwelling types, there are obvious potential problems with cluster sampling. However, since the heterogeneous nature of the country is so seemingly well known, we argue that the potential pitfalls in clustering can be readily and clearly avoided.

For example, there are differences between city dwellings and village dwellings. Indeed, there are differences between the cities themselves, as well as between the villages themselves.

Our approach

Given the fact that lots of information is available on Nigerian cities, towns, villages and hamlets with respect to dwellings, we propose that the whole country of Nigeria be divided into what we call multiple clusters for the purpose of cluster sampling in order to establish a population figure for Nigeria that can pass standard statistical tests. Table 1 summarizes the type of multiple clusters envisaged:

Table 1 Possible Configuration of Clusters

Population	Variables	Elements	Clusters or Sampling Units
1 Cities towns	To-be-determined by such essentials as age, sex etc usually obtained from regular census to be included	PERSONS IN all cases	a) Multiple dwellings e.g. block of flats (b) Single dwellings
2 Villages			(a) Multiple dwelling e.g. large multi-family compounds (b) Single dwellings
3 Hamlets			(a) Multiple dwellings (b) Single dwellings

Such specific issues as acceptable definitions of cities, towns and villages can be resolved by demographers, geographers and other specialists. The point being made here is that while these clusters would then be sampled by at least two independent groups of enumerators working on different days, given randomness, the two or more independent groups will have a high probability of not ending up with exactly the same clusters being sampled.

For those with a good grounding in experimental design.the preceeding statement is clearly nontrivial.

And what is the object of all this? Well, we will end up with at least two estimates of the Nigerian population by at least two independent groups of enumerators—thus hopefully ruling out allegations of collaboration and or collusion. One is tempted here to suggest one external body of enumerators. However, the happy result of all this will be the fact that one group's result can then be compared with the other group's result.

The usual statistical measures can be obtained very effortlessly. For example, the sample mean of the n elements in the sample is used to estimate the population mean Y. It is also the mean of the cluster means. Thus given a number of clusters:

$$\bar{y} = \frac{y}{n} = \frac{1}{n} \sum_{j}^{n} yj = \frac{1}{aB} \sum_{\alpha}^{a} \sum_{\beta}^{B} y_{\alpha\beta} = \frac{1}{a\beta} \sum_{\alpha}^{a} y_{\alpha} = \frac{1}{a} \sum_{\alpha}^{a} \bar{y}\alpha$$

Most of this should be familiar and can be found in most elementary texts in statistics. However, we must point out that there is a factor $\underline{B}/\underline{B}=1$ which indicates the selection probability of any elements, whenever its cluster is selected.

Strictly speaking, the types of clusters that will emerge from our suggested approach are bound to be unequal. This presents no problems at all. Again, although the standard statistical measures are readily computed, the formulae for obtaining the mean and variance for unequal clusters, for example, are slightly different.

Since we go more deeply into mathematical niceties about estimation and prediction in the next section, suffice it to say here that a simple process of multiplying the mean by the total number of clusters yields the final population figure. The beauty of all this lies in the fact that there would be at least two independent sources to compare. Again, the details of the intricacies of extracting appropriate and usable demographic and economic data from this kind of suggested approach are beyond the immediate scope of this preliminary presentation. For the skeptics who might already prematurely smell, blood, we urge to without the slaughter dagger until the notions of stochastic processes, white noise, linearity, optimal sample and design, sequential analysis, stationarity and best predictors with filters *filter through.* The cost of this approach is taken up later in this presentation.

Prediction/Projection Methodology

Everything should be stated as simple as possible but not simpler. Einstein.

The simplest model for population projection is a multiplicative birth-and-death process. Our discussion in this segment takes off with some simple-minded assumptions aimed at clarifying the complex methodology presented. The goal is to work from the simplified to the complex real-world picture. We do this in the belief that once the methodology is sufficiently understood, the modelling is no longer inaccessible.

Supposing we pose our problems in the following way–

(1) That while female members of the population were sampled in those clusters and

(2) that the multiple birth-and-death process we choose to consider here is a temporarily homogeneous process. then:

$$r(t) = r_o(t) + \int_o^t S(T) r(t-r) dr \ldots \quad (1)$$

is the expected female birth-rate $r(t)$ which satisfies the integral renewal type of equation stated above, where $s(t)$ is the expected female offspring rate at time t of a female born at time zero, and $r_o(t)$ depends on the value $r(t)$ prior to $t = 0$.

Without loss of generality, we point out that the linearity of equation (1) ensures its acceptance as an expectation equation although such variables as sex change ratio and immigration are omitted. Having crossed the first hurdle in the direction of our methodology, it now remains to express the population growth process as a stochastic process. Clearly, the stochastic aspect can be introduced "by keeping to generations as a strictly discrete time variable." (Bartlett, 1978:123–124)

Now, what about R, the net reproductive rate which may be defined as the mean of the female replacement distribution per female? Well, in our search for a best predictor we need to make a strong statement about stationarity. With R defined approximately above, it follows that when $R = 1$, the population mean size is stationary, although this fact is insufficient for complete stochastic stationarity.

The intuitive and precocious reader will not miss the fact that the coefficient of variation for a population with constant mean is of the order: $\sqrt{(t/n_o)}$ where n_o is the initial population size. In terms of humans, this means that a population of 50 million people with t equal to 2 units or 50 years (a generation is 25 years) yield $\sqrt{(t/n_o)} = \frac{1}{5000}$ and the fluctuations are insignificant.

For formality, let us now re-pose the problem in equation (1). *

Let $r(t)$ be a stationary process with zero mean and covariance function $R(v)$. Does there always exist a filter, with impulse response function $w(s)$, s.t.

$$r(t) = \int_{-\infty}^{t} w(t-s)\, I(s)\, ds, \quad (2)$$

where the input $I(s)$ is white noise?

There are several possible mathematical interpretations of white noise, but for our purposes it is sufficient to define it as a normal process with a covariance function (the equivalent of $s(t)$ in equation (1), which refers to expected female offspring rate at time t of a female born at time zero).

A necessary condition for equation (2) to hold is that the covariance function of $r(t)$ be equal to some positive constant C and square integrable function $w(s)$,

$$E\,X(u)X(v) = C\int_{-\infty}^{min(u,v)} w(u-s)w(v-s)ds, \qquad (3)$$

which is the same as stating that

$$R(v) = C\int_{0}^{\infty} w(y)w(y+v)\,dy \qquad (4)$$

Equations (3) and (4) are actually sufficient conditions themselves for equation (2) to hold

For those familiar with spectral density, since filters and spectral density now seem to be irretrievably happily married, a possible sufficient condition for equation (1) to hold is

$$\int_{-\infty}^{\infty} \frac{|\log f(w)|}{1+w^2}\,dw < \infty \qquad (5)$$

So where has all this led? Well, the subject in this section was and remains prediction. Without wading through the complex mathematics, suffice it to say that if we can represent a population $x(t)$ as a stochastic linear stationary process which is the output of a filter with white noise (previously defined) as input, then clearly the best predictor of that population $x(t)$ *given the values* of x(t) and r(t) for $-\infty < t < t_0$ is given by the first integral in the following equation

$$X(t_1) = \int_{\infty}^{t_o} w(t_1-s)I(s) + \int_{t_o}^{t_1} w(t_1-s)I(s)\,ds + \qquad (6)$$

for the general population, and

$$r(t) = \int_{-\infty}^{t} w(t-s)\,I(s)\,ds$$

for the multiplicative population or population growth rate.

The Problem of Optimal Sample Size

In statistical methodology and theory, sampling is an acceptable alternative to the complete enumeration if a population of interest is too large and costs are prohibitive. And even when the cost is acceptable, the time factor may be preclude complete emmeration.

Infact, sampling theory has undergone such fine-tuning over the years that in a lot of cases, under well defined settings, sampling a population can reveal as good and accurate information as can be obtained through complete enumeration.

The first part of this presentation dealt with the problem of clusters and clusters sampling as an alternative to the census. More specifically, how does one *squeeze* as much information about a whole population (in this case, the population of the country Nigeria), from sampling clusters, or from partial enumeration as one would obtain from a complete enumeration or census? Posed differently, how many clusters must be sampled in order to obtain a very good picture of all the clusters? How does one know "when enough is enough"? We now turn to sequential analysis and optimal design methodology for help.

Imagine that we want to estimate a population P which can be observed with an error due to estimation which we will call Z. (see Chernott, 1972: Chap. 1). Then $X=P+Z$, where Z cannot be directly observed and has zero mean and variance δ^2. After n independent observations on X such as X_1, X_2, X_3,. . . Xn we may use the sample mean

$$\overline{X} = \frac{1}{n} \sum_{i=1}^{n} X_i = P + \frac{1}{n} \sum_{i=1}^{n} Z$$

as an estimate of $\underline{P}$ the population.

What about optimal sample size n? This is where cost considerations come into play. For example, imagine that $H(P,t)$ is the cost of estimating the population using the sample size n. In the case where

$$H(P, t) = k(t-P)^2$$

and

$$C(n) = cn$$

The expected cost of using $\overline{\overline{X}}$ based on a sample of size n is given by

$$\begin{aligned} R(P, n) &= kE\ (X-p^2) + cn \\ &= k\delta^2/n + cn \end{aligned}$$

and ignoring the fact that n is integer the preceeding equation is minimized by

$$n_o = (k\delta^2/o)^{1/2}$$

whose minimal value is given by

$$R(P,n_o) = 2(ck\,\delta 2)^{1/2}$$

The cost equation presented is justified by the fact that a statistical procedure or strategy is evaluated in terms of the probability distribution of the cost (ordinarily random) resulting from its use (Chernott, 1972:6). However, oftentimes, a linear cost function of the type

$$C(n) = c_o + c_n$$

is adequate for establishing the cost associated with taking *n* observations. Note that the constant c_o has no effect on the solution and so may be deleted.

We mention in passing that the squared error loss $H=k(t-P)^2$ is a classical one, and that it is accepted as a good approximation to a generalized loss $H(P, t)$ if H is assumed to be zero and to have its minimum where t = P, and to be smooth in t. In which case, $H(P,t)\;\; k(P)(t-P)^2$ for t which is close to P if $\delta^2\; H(P,P)/\delta t^2 > 0$.

The main attraction of this problem of approximation lies in the fact once a solution is found, this approximate solution is also approximately a solution to the real world problem. This is, strictly speaking, in conformity with the expectation that squared error handles variance very well.

Why should we use our sample mean (from the cluster samples) to estimate the population clusters? More formally, why is X an estimate of P? Information about the probability distribution of the random error helps determine a good estimation. For example if the erros are normally distributed, X is a very good estimate. Without digressing into the theory of *maximum likelihood estimation*, let us simply state that X is a time-tested good estimator with well-defined mean and variance.

The sample size *n* depends on our knowledge of o^2. But what if o^2 is unknown? The best answer is to guess some initial value for o^2 and since $R(P, n)$ is not sensitive to small variations in sample size *n* about n_o, *the cost of a wrong guess cannot be high. This is where sequential analysis comes* in. For example, after n observations, we estimate o^2 in terms of our observed sampled variance as

$$S^2 = \frac{1}{n-1} \sum_{i=1}^{n} (X_i - \overline{X})^2$$

Then where is the optimal sample size? Well, this occurs where

$$n \geqslant (ks^2/c)^{1/2}$$

If the guess is wrong, another observation is taken and the procedure is repeated. This method results in a good approximation to the optimal value of $P(P, n_0)$ when o^2 is known as Robbins and others have demonstrated. Indeed the results obtained for the normally distributed erros indicate a remarkably small cost of ignorance of o^2, a cost measured by at most a bounded number of observations (independent of k, o^2 and c). Calculations show this cost to be about that of wasting one observation. This result indicates a higher order of efficiency than is generally associated with statistical procedures" Chernott, 1972: 7).

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NOTES

The most exhaustive discussion of clusters and cluster sampling can be found in Kish (see references).

(see parzen, 1962: 113)

Measuring the Invisible Work of Invisible Women: Consideration for Census Planning

Renee Pittin

ALL TOO often, indeed almost invariably, any mention of the Nigerian census is prelude to a discussion of gross population figures. The arguments concerning the validity (or lack of validity) of past population figures are well known, and present discussions centre more around the establishment of a climate conductive to a successful population count, the latest techniques for conducting an accurate census, the pressures which might militate against even the most fall-proof of strategies, and the last-ditch countermeasures which might then be brought to bear to produce a statistical phoenix from the ashes of political claims, threats, and machinations.

The importance of obtaining accurate data concerning something so very basic as the total number of Nigerians is unarguable. Accurate gross population data is, in itself, vital for rational and well-grounded organisational revisions and development planning. The other aspect of the importance of gross population data is that, unless those figures are accepted as accurate, the entire census founders, and no portion of the results can be treated as valid.

The inordinate amount of attention devoted to gross population data, and the disbelief in or discarding of that data in the past three censuses, has been both a blessing and a curse:-a blessing, in as much as the focus on population, and the ultimate rejection of the population figures, have meant that the equally dubious or even more disastrous sections of the census have been ignored, or rejected outright with the population data;–a curse insofar as the rejection of the census in its entirety has precluded serious consideration of the theory and procedures which inform the collection of other categories of census information.

Since 1921, with the first serious attempt to present detailed census statistics, the Nigerian census has been designed to display, on a nationwide canvas, a broad range of socio-economic data. The areas within which the census organizers sought to secure detailed information were chosen neither frivolously nor arbitrarily, but rather were seen to be of particular social, economic, and/or political significance. One such area, representing an exceptionally undervalued source of Nigerian growth, is the participation of women in the Nigerian economy.

* *Dr. Pittin lectures in the Department of Sociology, Ahmadu Bello University, Zaria.*

In the course of this paper, we shall attempt to establish, through reference to microdata and to previous censuses,, effective and accurate methods of identifying, quantifying, categorising and analysing women's economic activities. It is our contention that past censuses have suffered from a series of procedural and perceptual errors which have, with one notable exception, consistently and grievously underestimated women's economic roles. Through the framing of questions, the selection of respondents, the weighting and the very choice and extent of economic categories, a vast amount of productive female labour has been systematically excluded from census results, and thereby from national recognition or knowledge. The effects of such a lacuna include the spectre of unbalanced and inequitable development, based on the misconceptions contained in these ill-formulated approaches to women's roles. This would be tragic for women, and would render unattainable the desired goal of effective and sustained economic growth for Nigerian as a whole.

The "Invisible women": women in seclusion

For more than a decade, women in particular have researched and written about the nature of women's economic roles, emphasizing the lack of recognition of women's contributions to the overall economy. This is everywhere the case in relation to women's roles as housewife and mother, and with respect to the expectations that women are, and remain, a prime source of unpaid family labour. Within the household, the double set of hierarchical relations which permits the household head to command the labour of household members under the guise of promoting the 'collective interest' of the household, and which permits the husband to alienate the labour of his wife/wives under the terms of the 'conjugal contract', ensured the continuing exploitation of women. The gender ascription of household division of labour and authority has "the effect of making the activities of men and women non-comparable and ensuring that the goods and services exchanged do not have an objective, quantifiable character, but the qualitative character of being associated with specific social positions" (K. Young et al, 1979: 17). To the extent that *any* woman is engaged in unpaid and undervalued or unvalued household work, and in agricultural work and other household economic endeavours as an unpaid family member, it may be said that her economic contribution is invisible.

However, the work of another category of women, and the women themselves, are more invisible still, at least to the men who design the censuses, and control the planning for social and economic development adopted by some international organizations and development planners, secluded women are characterized by 'low extrafamilial visibility' (C. Presvelou, 1975: 50). That is to say, their roles and responsibilities are carried out largely within their own family or marital home, or within a similar domestic unit. The women's independent entrepreneurial activities, real enough among Hausa women, for example, to provide many of the commodities purchased daily in the community, statistically are often treated as being as invisible as the women themselves. Such women suffer double discrimination: their household labour is not treated as 'work', and their own crafts and trades, which are carried out within the home and which furnish them with an independent and not infrequently lucrative income, are unseen and all too often unrecorded in surveys and censuses.

Among married Hausa women in Northern cities, seclusion has been the norm for several decades. Originally the province of the nobility, the religious functionaries, and the wealthy, seclusion is now common among all classes of women. So extensive is the practice that "[even]' people in the lower economic strata, in spite of their strained economic circumstances. . . keep their wives in complete physical seclusion" (H. Adamu, 1971: 10). Seclusion is spreading to the rural areas, and is becoming increasingly common even among farming households struggling for subsistence. In Batagarawa, the Mallamawa District seat six miles from Katsina City, Hill noted that:

> . . . virtually all women. . . are in full Muslim seclusion, to the degree that during the course of a normal day they do not emerge from their compounds. (P. Hill, 1972: 22)

In the Kano close settled zone, seclusion is so severe that even elderly wives are kept secluded (P. Hill, 1977: 84). D.W. Norman wrote of the importance of seclusion in rural Zaria (1974 : 10), and at least partial seclusion was practised in the three Sokoto villages studies by Goddard (1973).

Seclusion does not hinder Hausa women from being economically active, Rather, it can and often does have the opposite effect, for it frees women from the tedious daily fetching and carrying, and seasonal field labour, which would otherwise be their lot. Indeed, probably the most valuable benefit conferred by seclusion is the opportunity it affords for women to pursue their own money-making activities.

In the past as in the present, positive sanctions and expectations surround women's engagement in independent income-earning occupations. In a 1948 rural Zaria study, M.G. Smith found that of a population of 421 Hausa women, only two (.005%) had no craft or trade to help support themselves Smith, (1955:244). At present in rural Zaria, the ethos impelling women to work is so strong that it is "socially unacceptable [for a woman] not to have an occupation" (E. Simmons, 1975:158).

Seclusion makes it impossible for women to sell their goods themselves outside the home, but a vast army of children has been largely responsible for the hawking of women's wares, while some women await buyers within the confines of the home. Hausa women do not have to go to the market to trade; the market comes to them. Or, as Hill states, ". . . the sellers as a group, together with their customers, are the equivalent of a market-place. . (1969: 393). According to Hill, the economic activities of Hausa women places them squarely in the same category as the highly visible female traders who make up the "huge class of women food retailers who frequent rural periodic markets in many regions of southern West Africa" *(ibid.)*.

Women's work: the Katsina case

In the predominantly Hausa city of Katsina, in Kaduna State, as in other Hausa areas, the majority of adult women are economically active. This was clearly established in a study concerning women's career strategies and economic opportunities carried out from 1971 to 1973 by the present author.[1] Two city wards, showing notable differences in levels of (male) income, occupational structure, class affiliation, and historical tradition, were selected as generally representative of all strata of the urban Hausa population, and provided the data base. A partial socio-economic census of the two wards included information on the economic activities of all adult women, married and no longer married, in the census frame.

In the largely artisan ward of Marina, 176 (83.4%) of the 211 women enumerated, were independently economically active. In the elite ward of Yarinci, with a large salaried male population, only 121 of the 191 women included in the census sample, or 63.4%, were engaged in individual income-earning activities. Some women were prevented by physical disability or social convention from working. These include women who are too old, feeble, or ill to work, as well as women who were recently married for the first time. Such women do not generally begin an occupation until they have spent about a year in their husband's home. Other women unlikely to work are women in transition, such as women recently divorced, or widowed.

One significant difference between the two wards, however, and a phenomenon which appears to be confined to and indicative of the modern urban elite, is the deomonstration of conspicious leisure.[2] Where all women have the leisure which seclusion affords, the ultimate proof of status and wealth has become the non-utilisation of the available time for personal economic advancement. The younger women in Yarinci who are married to wealthy civil servants, form the majority of this group of women.

The Marina statistics, based on a craft and trade oriented population, are probably more generally relevant to the wider urban situation than those of Yarinci, which includes many members of the traditional and modern upper class. The types of work women do in the two wards reflect the class and occupational composition of the wards, and also demonstrate the wide range of activities in which women are engaged.

In both wards, the preparation and sale of snacks and titbits is an

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important and widely chosen occupation. More than a quarter (26.7%) of the Marina working women, and almost half (47.5%) of the 121 women with occupations in Yarinci, participate in this type of trade. Hausa domestic consumption patterns assure a continuing market for the sale of cooked foods, particularly for breakfast, lunch, and between meals. Simmons noted that in rural Zaria,

> 'Prepared foods' consumption. . . was shown to account for 23% of the daily cash expenditures on food by the average household.
>
> (1973, p. 56)

In Katsina with a wider range of foods to choose from, and a year-round availability of cash, the figure is doubtless even higher.

The other major women's occupation in Marina, pursued by 48 women (27.3% of the economically active census population), is that of embroidery, knitting, and sewing.[4] Such work demands minimal capital outlay, and can be done at the convenience of a woman with small children. Marina, which includes a large number of dryers, tailors, and other cloth workers, provides logical base for women's textile-related craft work. In Yarinci, with its elite population, it is not surprising that the second-largest female occupational category is that of 'domestic service', employing twenty women, or 16.4 percent of the working women. Domestic service includes pounding, grinding, and general domestic labour for wages. Such women are usually employed directly by other women in the ward.

Work done by the remaining women includes, among other occupations, large-scale trade of foodstuffs and others goods, the preparation and sale of meals (as opposed to snacks), petty trade, traditional craftwork and, for ten Yarinci women, salaried government employment. Of all these occupations, and among all these women, only fourteen women, including the ten government employees, are obliged to work outside the domestic domain. The other four women include one woman trading in the market, one water seller, and two messengers.

It should be clear from the Katsina data, and from the supporting evidence from other Hausa towns and villages, that the vast majority of Hausa women are engaged in economically productive occupations which provide them with an independent income, even within the context of seclusion. We have established that the women play a wide variety of economic roles in the community. They produce goods or services in return for payment in cash or kind, as well as remaining responsible for virtually all domestic duties related to housekeeping, cooking, and childcare. Women in the rural areas have additional duties, for they are generally expected to assit with agricultural activities also, in the processing of foodstuffs and other crops if not in the actual harvesting (M.M. Konan, 1975: 18–19), as part of their 'contribution' to subsistence.

With this background, let us examine the economic roles of Hausa women as they have been expressed in census data over the years. We shall focus particularly upon information which includes the Katsina area, inasmuch as we have present documentation of women's occupations in the area, and evidence through case histories of a tradition of active female economic participation in trade, crafts, and services.

Census: 1911

The first nationwide census appears to have been a product of educated guesswork and intuition. The purpose of this census was to establish population figures; no effort was made on a national scale to obtain socio-economic data. Therefore, we can disregard this census, and move on to 1921.

Census: 1921

The 1921 census was an ambitious venture, eliciting various kinds of statistical information, including, for example, age, occupation, religion, and education. Its success was limited through factors such as the vast area to be covered, the fledging infrastructure, and the suspect status of the enumerators, who were otherwise the area tax assessors and collectors. In presenting the census data, C.K. Meek was obliged to note that "it is not pretended that the count . . . in the provinces is anything more than approximately accurate . . . ' (C.K. Meek, 1925, Vol. II: 169). And with regard to women's occupations, the writing was already on the wall. Some of the methodological difficulties which have plagued succeeding census were already apparent. Meek stated that

> The collection of occupational statistics occasioned . . . the greatest difficulty. . . . There are no doubt many omissions, especially as regards the occupations of women, which, in some districts, were not obtained at all. (p. 172)

Elsewhere, he reasons that

> The returns of the occupations followed by women were particularly unsatisfactory, owing no doubt to the multiple and occasional character of the occupations pursued by women. (p. 213)

Thus, we have the following possibilities:

(a) That women's occupations were disregarded as a matter of procedure;

(b) That women carried out so many occupations that effective evaluation was impossible;

(c) That women engaged in two (or more) equally significant occupations (the dual career syndrome), and that therefore census data based on one occupation presented only a fraction of the actual economic situation;

(d) That women did not carry out all occupations all the time, and that therefore important occupations were not included because

(1) the woman was not pursuing the occupation at that time;
(2) the woman meanwhile was engaged in other, full-time, occupations which took priority in census enumeration.

Certainly, it is true that the census design did not permit enumeration of the multiple economic activities pursued by most Hausa women (and by Hausa men, for that matter). But in the case of women, the never resolved dilemma of whether women are housewives, or have another primary occupation, is already present.

At the time of the census, Katsina City was included in Kano Province. No occupational units smaller than the province are provided in the census, but a brief glance at some of the statistics is instructive. Kano Province, and neighbouring Sokoto Province, have similar climate, crops, and culture, the population being largely Hausa and Fulani. Yet the statistics concerning women's occupations were as shown in Table 1.

Table 1 Women's Occupations, 1921

Female Occupations	Kano		Sokoto	
	Number of Persons	%	Number of Persons	%
Agricultural Workers	540,537	48.27	21,246	3.88
Textile workers	334,625	29.89	76	.01
Traders	1,826	.16	3,057	.56
Potters	3,279	.29	3	–
Domestic and Miscellaneous	239,466	21.39	522,828	95.55
TOTAL	1,119,733	100	547.210	100

*Derived from Table 35 and 36 in Meek, 1925, Vol. 11, pp. 230–1.

The figures purport to show all adult females in the two provinces. The data for Kano Province include half the women in the category of agricultural workers, very probably an underestimate among largely unsecluded female population in a predominantly agricultural area. The large number shown as textile workers anticipates 1931 census classifications, discussed below. Only a fifth of the women are in the domestic and miscellaneous category, which is comprised of housewives, and women with unidentified and unspecified occupations.

The Sokoto results are utterly different from those of Kano. In an equally rural setting, and among people largely of the same culture, less than 5 percent of the entire female adult population was defined as having a principal economic role outside the domestic sphere. Such gross discrepancies, which are a function of strikingly different perceptions of women's work, presumably at the supervisory level, are evident also in subsequent census, and are considered in greater detail in relation to these later censuses, for which more information is available. However, it is worth noting that the difficuties of classifying women's roles, and the wildly divergent categorising of women's work even within the same society, have been apparent since 1921, although precious little has been done in the subsequent **sixty years** to find solutions. Indeed, in certain later censuses, the results have been demonstrably *less* satisfactory than in this earliest of nation-wide enquiries.

Census: 1931

For the Katsina area, the census of 1931 may have been the most accurate in recognizing women's economic activities, although there were errors in classification. Magajin Gari District, in which Katsina City is located, was one of six districts in Katsina Emirate in which an intensive census was carried out. The six districts, all on the Niger border, were subject to more stringent census enumeration procedures and supervision that were achieved or possible elsewhere in the country, with limited exceptions.

The figures were deemed by the Government Statistician to be very accurate, with a margin of error of 1–12% (1931 Census, Vol. 1:6). A more disinterested researcher, Kuczynski (1948: 567), estimated a probable error of ± 5%. While both these estimates are probably too sanguine, they do demonstrate a greater degree of confidence in the census material than has been the case before or since.

Occupational figures are based on the whole of the Magajin Gari District, of which Katsina city represented two-thirds (67.1%) of the total. Unfortunately, the district boundaries were altered in 1941, rendering comparison with later census data difficult. What is of particular interest, however, is the categorisation of women's occupations in the census, and the high level of women's economic participation derived therefrom.

Instructions to enumerators required them to designate the principal means of livelihood of all persons who actually do work and carry on business. . . as well as any subsidiary occupation. . . (1931 Census, Vol. II: 40). Females in the Magajin Gari District were included in twenty-five categories of gainfully employed, in comparison with 57 categories relevant for males in the district.

In some respects, the categories used for women are presumably accurate, including, for example, a blacksmith, a builder, two woodsellers, and ten manufacturers of leather goods. In other respects, categories seem to have hidden more than they reveal, for well over two thirds (70.9%) of all females are classified as being engaged in spinning. While it is certainly true that women and girls could and did spin, and that the local textile industry was dependent on women's input for its supplies, it is highly unlikely that such a huge number of women, totalling 11,989, were primarily occupied with spinning. This is reinforced by the data concerning trade in foodstuffs. Such trade, long a basic preserve of Hausa women, was the primary occupation of a mere 2.9% (498 females) of the Magajin Gari District.

It is ironic and yet depressingly consistent in terms of western stereotypes, that the mass of Hausa women should have been categorised as spinsters, an economic role so intimately associated with women, and with hearth and home, that the very term has become the title accorded to an unmarried woman in English legal parlance. On the other hand, although the classification is so widely used in the census as to force one to conclude that this craft was treated as virtually synonymous with being female, yet there is a positive side to the categorisation. For it is only in this census that women are actually given credit, albeit as spinsters, for being economically active and productive members of the community.

Comparison with 1921 statistics is well-nigh impossible. By 1931, Katsina Division/Emirate had been removed from Kano Province, and was incorporated into Zaria Province. As women's activities in the earlier census had been presented only at the provincial level, and as the Magajin Gari women would have formed only a small part of the total population, comparative data would be of little significance.

Another important difference between the two censuses is that the 1931 intensive census included persons of all ages in the occupational survey. An almost equal number of males and females were recorded as 14 or under, (about 40% and 39% of the male and female population, respectively [1931 Census, Vol. I: 111–114]), and an almost equal number of males and female were listed as without occupation (about 22% of the male and female populations). Hausa children play a vital role in the economy, especially as hawkers of the commodities produced by women, and as farm workers, but it would be a hardened enumerator indeed who included many children of four years old or younger. As this category of children made up about 17 per cent of the total male and female population, it is reasonable to assume that they comprise the bulk of the population without occupation. This fact is important, for it reinforces our contention that the 1931 census presents Katsina females as equal economically active as males, and shows virtually all females to be engaged in crafts or trade, an accurate assessment which was destined not to be repeated in subsequent Nigerian censuses.

Census: 1952

Scholars have disputed the accuracy of the 1952 census figures, especially with reference to the population results.[5] However, census presentation of northern women's economic contribution to the Nigerian economy is not subject to dispute, for it was an unmitigated disaster. Problems which had not arisen in over thirty years became insurmountable, and the approach to acquiring information regarding women's economic roles showed a naivete and lack of forethought astounding in a country which had already cut its demographic teeth in two previous censuses.

The difficulties include, among many other things, the occupational categories used. In earlier census, while women were certainly classified rather arbitrarily, at least the categories for classification were numerous and clear-cut. But in the 1952 census, occupational categories were reduced to six for men, and for women, all of three! And even with this derisorily small number of categories, attitudes towards women's role, and 'women's place', resulted in a major errors in classifying women's economic activities, and in effect 'losing' women's occupations within the walls of the household.

The three occupational groups for women were as follows: *

(a) Agricultural workers, farmers, fishermen and all other occupations closely related to agriculture, such as hunters and guides, lumbermen, dairy workers. . .

(b) Traders, clerical and related workers. All persons engaged in trading or assisting in a trading establishment. . inclu(ding) store owners. . . shop assistants, pedlers (sic) . . market stall traders, and all clerical workers engaged in commerce.
N.B. This group includes women (e.g. potters) who make up goods and sell them in the markets as a part-time employment.

(c) Other females. This miscellaneous group . . . will include *all females not cov*ered by categories (a) and (b).

There was no separate category allocated for craftswomen (as there was for men), although this was the major classification of Katsina women in the 1931 census. While a specific category was provided for men not in the 'labour force', no such category existed for women, a precursor of the errors of the 1963 census. Women are not seen as being an integral component of the 'labour force', with the implication that while ablebodied Nigerian men are expected to contribute to Nigeria's economic growth, Nigerian women may or may not, with no real government interest or knowledge of their actual participation.

Needless to say, the data regarding women's occupations, based on only half the categories created for men, which were in any case not equally applicable to women, and which took no cognizance of women's many other economic roles, were inaccurate and utterly misleading. Indeed, so untenable were the data that the census publication included the following disclaimer:

> The three occupational groups for females have not provided as useful an indication of primary occupations as the male groups. This was not merely because females were classified in fewer groups. Most females undertake some of the work on the farms, and many are partly occupied with home crafts or in trading. Undoubtedly Enumerators had great difficulty in deciding whether the duties of housewife were or were not the *primary* occupation. (1952 Census, p. 9 [emphasis in text]

The latter two difficulties the question of what constitutes part-time work, and the valuation of the role of housewife, had been encountered as early as the 1921 census. Their reapearance suggests that indufficient effort had been made to solve these problems. Other factors discussed below militate against easy solutions. But even this catalogue of sources of error tells only part of the story, for other mistakes in procedure and cognition are doubtless also of importance. How off-base the census information was, is apparent in the Magajin Gari statistics, shown in Table 2.

Table 2

	Occupation	Number of Females	%
(a)	Agriculture and fishing	1,157	4.3
(b)	Traders and clerical workers	1,507	5.6
(c)	All others	24,182	90.1
	Total	26 846	100.0

* *Source* 1952 Census, p. 38

Any census formulation which manages to collect all but 10 percent of the total population in a residual, 'other', category is clearly poorly planned and shows noncomprehension of the respondent population. The errors noted by the Government Statistician are those of insufficient classification, inadequacy of existing categories, and lack of instruction to enumerators, presumably based on inadequate recongnition of problem areas at the higher levels. To these, we would add that the categories used are not only too few, and too male-biased, but also are totally unadapted to taking into account the spatial and ideological boundaries imposed on women's economic participation in the context of seculation. This is particularly relevant with respect to category (b), trading. Even in the description of trading, census organizers emphasised the extradomestic nature of trade, as they saw it. They wrote of trading establishments, stores, shops, market stalls, and pedlars. The potter, is the only commodity producer who appears to sell her goods herself in the market. This approach necessarily submerges the vast number of secluded women whose 'trade' is evident on the heads of an army of children, who were, perhaps in some cases, included in the tally of traders.

We have seen from the Katsina study that most women are engaged in the production and trade of foodstuffs and other goods That the extensiveness of this economic activity has been largely unrecognized or misunderstood is clear from the census data, and from subsequent comments upon it. To demonstrate this, we present in Table 3 the 1952 census data for Katsina Province, and the three surrounding provinces–Zaria, Sokoto, and Kano–concerning women's occupations.

Table 3 Women's Occupations

	Katsina		Zaria		Sokoto		Kano	
OCCUPATION	No.	%	No.	%	No.	%	No.	%
Agriculture and fishing	102[a]	13.4	28	6.8	161	11.8	427	24.6
Trading and clerical	4	0.5	13	3.2	73	5.3	523	30.2
All others	656	86.1	371	90.0	1131	82.9	783	45.2
Total	762[b]	100.0	412	100.0	1365	100.0	1733	100.0

(a) Numbers represent thousands
(b) Includes entire female population

* Source: (Population Census of the Northern Region of Nigeria, 1952, p. v)

Katsina, Sokoto, and Zaria follow a common pattern: four-fifths or more of all females are included in the category of 'others'. Sokoto shows a relatively large number of women traders, but this number is a small proportion of the total female population. The most strikingly divergent set of statistics is that of Kano, with almost a third of the female population classified as traders, and another quarter involved in agricultural pursuits.

Commentators on the census were compelled to remark upon this exceptional data. Prothero, for example, noted that there was 'no ready explanation for the large number of women with occupations in Kano Division[6]. . . when in all other important Muslim areas the percentage of occupied women is low. . . (1956: 175). Mabogunje was struck by

> . . . the most spectacular anomaly in female occupations/. . . in the densely settled zone around Kano. Some of these towns . . . returned over fifty percent of their female population engaged in trading or craft.
> (1968: 166)

He explains the anomaly, as he sees it, by reference to the 'great tradition of trading and craft activities in these areas' and the 'high competition for survival'. He suggests that

> It may be because of the small size of holdings here, that women may be forced to supplement family income by trading and craft production. (ibid)

However, we know that Hausa women in Kano, as Hausa women elsewhere,[8] control their own income individually and inalienably, and are no more or less involved in economic pursuits than other Hausa women. We reassert that the anomaly is produced through the inaccurate perception of the nature of northern women's economic participation, which is reflected in the census data outside Kano. It is only in the Kano figures that there is an inkling of the profound role women play in the daily economic life of the community. The unresponsiveness of the census results is underlined by the fact that in only *two* of the northern provinces, Kano and Bauchi, were up to half the female population shown to be engaged in scheduled occupations.

The inaccuracies of census figures regarding women's occupations cannot be ascribed only to the misconceptions of census organizers and enumerators, however, serious though these were. A basic procedural error greatly exacerbated their difficulties and contributed in large part to the faulty results obtained. This error was the use of (male) compound heads, or husbands, to furnish the information used in the census. That this procedure did encourage male-biased replies is evident from the questionnaire itself, for the instructions seem very straightforward. The role of *homemaker* was to be entered for married women who have *no occupation* other than their own household duties' *(Census of Nigeria,* 1952–3, Schedule 2, p. 50 [emphasis mine]). That such clear-cut instructions caused difficulties doubtless was as much a function of male respondents own biases and concerns, as of (usually male) enumerators' confusion in establishing occupational priorities.

One immediate reason for a husband or compound head to deny women's economic activities might have been the fear of taxation. This has been given as one factor responsible for the population undercount in the 1952 census, and could well have been important in the lack of recognition of women's occupations. However, based on the Katsina research, it is our contention that other reasons also come into play, and that a husband commonly glosses over his wife's occupation(s).

This is partly the result of differing male and female perceptions of women's roles. To the husband, the woman's primary occupation is that of wife and mother, caring for himself and the children. The woman, while certainly recognizing and performing her domestic duties, knows the value of her independent work and has no reason (as her husband may) not to acknowledge it. Unfortunately, she is not asked, and the husband's statement stands unchallenged.

A supporting factor in differing male and female responses is that it is more prestigeous for the husband to claim total support of his wife, rather than admitting that she has an independent income, or has to help in subsistence activities. This state of affairs existed with regard to the Katsina rural population at the time of the 1952 census, especially in relations to the partial or nonseclusion of women. A.T. Grove states that in Bindawa District, southeast of Katsina City,

> The women of poorer families help in farming. In general men are reluctant to admit that their wives assist in farming or have land of their own. (1952: 44)

For urban dwellers, it is easier to hide women's occupations, which are carried out within the compound, and thereby to enhance the husband's status.

Another dimension of the problem concerns the distribution of power and authority within the household. Where a husband lacks real authority over his family, he may well attempt to symbolically reassert authority by insisting on his economic control within the household, and by denying his wife's independent economic activities. While the enumerator may neither know nor care about the power struggle being waged within the compound walls, the effect is the reinforcement of the myth that wives do not have other occupations. As long as men are the source of census data, and as long as their answers are not subject to independent verification, the data will continue to portray women as economic dependents of husbands, fathers and other male kin.

For all its faults, the 1952 census had one great mitigating virtue: census information was openly and extensively provided. Along with the census data, questionnaires, instructions to enumerators, and procedures were also published. Only with such complete information can the value of the numerical data be properly, and constructively analysed and criticized. The opposite end of the spectrum was reached with the census of 1963.

Census: 1963

The ill-fated 1963 census, following hard upon the nullified 1962 census, suffered from the same political machinations which destroyed it immediate predecessor. The population data alone is highly dubious, with reactions ranging from allegations of gross inflation to simple statements of overestimation. Certianly, it is generally conceded by demographers and other students of the census that the population figures are too high, even given the likely underestimation of population in the 1952/3 census.

Considering the unhappy results of attempting only to enumerate the population, it stands to reason that other statistics based on this disputed population would share the stigma of invalidity, and would be of limited value. The census office did eventually publish the results, preceded by the following caveat: 'The Statistical Tables are put out without any comment this practice is considered necessary as this time' (1963 Census, Lagos, Vol. I).

Our concern is particularly with the female occupational statistics, and there are still lessons to be learned from the 1963 census regarding procedures, definitions and classification of female workers in Nigeria. It is clear from the census results that none of the difficulties of previous census had been resolved. Indeed, the 1963 census managed to add yet another layer to the burgeoning collection of misleading labour statistics and categories. This was through the use of the concept of the 'labour force'.

Exactly who or what is included in (or more important, excluded from) the labour force, is nowhere specified, except insofar as certain kinds of occupations are named. Katsina Province is shown as having a female population aged 15 and over of 715,662 in 1963. Of this number, an amazingly small group of women, 27, 176, or 3.8 per cent of the total, were deemed to be members of the 'labour force'. In urban areas, which would include Katsina City, 8.2 per cent of the female population over 15, a total of 3,858 women, were in the labour force, mainly as hand spinners (again): 1,557; street vendors: 1,131; and domestic servants: 444. The total provincial figures, which give the ridiculous figure of 3.8 percent of adult women in the labour force, include in this same category fully 94. 2 percent of the Katsina Province men! The situation conjured up by these statistics is not only utterly incorrect, but also is clearly detrimental to the image of women.

There are some clues to this parlous state of affairs. It is evident that in 1963, as in 1952, the work of women in seclusion was ignored for the most part. This is revealed both with reference to women in trade being defined mainly as *street vendors* and also with reference to regional statistics concerning women's labour. Whereas the North is shown as having only 12.8 per cent of its adult women in the labour force, this figure jumps to 28.3 for the Midwest, 32.4 per cent for the Eastern Region women, and 62.1 per cent for women in the Western Region. Therefore the problems was not merely that of adjusting for the dual career syndrome, which is a women's double work as wife/mother, and also money earner. The problem dealt, yet again, with misperceptions about women's actual economic particiaption outside the work of housewife.

Another example of male bias is clear in the choice of occupational categories. Turning from the gross discrimination against women evident in the labour force/non-labour force statistics, let us consider tha labour force statistics only. Here, occupations were divided into eleven broad categories, one of which was that of inadequately described or unspecified occupations. Throughout Nigeria, it was women's work which repeatedly fell into this grabbag category. So pronounced was this tendency that, in the combined national census figures, almost a fifth (18.9%) of all women in the labour force worked at these inadequately described occupations, whereas the corresponding figure for men is an infinitesimal four-tenths of one percent (.4%)! Thus, both in establishing the *labour force*, and in defining work within the labour force, women's work is ignored, misunderstood, or ineffectively outlined.

Census: 1973

We do not have the statistics for the 1973 census, as these were not released. However, referece to the 1973 *Population Census Enumerator's Manual* suggests that some of the problems which had plagued earlier census were still unresolved, and that the work of secluded women in particular would again sink without trace.

It is made clear that a *home maker*, i.e. a person of *either sex* 'emphasise in text' aged six years and over who was wholly engaged in household duties and was not paid for this work (p. 29) was not to be included as an unemployed person.[11] *Not to be placed in the homemakers categories were the* following:

a) A housewife who traded for a few hours each day during the reference week.
b) A housewife who worked on her husband's farm without pay for at least 'emphasis in text' three days during the reference week.[12]
c) A housewife who worked in her own shop (Beauty Parlour, Beer Parlour etc.) for at least a few hours each day during the reference week. *(ibid.)*

Again, as before, a spatial component has been added. Trading generally assumes contact between buyer and seller. The latter two categories are straightforward, and rule out urban Hausa women, and many rural women as well. There should have been, as there is not, an example of 'a housewife who engaged in house-trade commodity production, or services for a few hours each day. . .' in order to clearly include the vast majority of busy, economically productive secluded women. It is not sufficient to assume such women will be included as having 'similar particulars to the above categories of women, as is stated in the Manual, for they have not been so recognized in past censuses.

In the 1973 census, as in previous censuses, information was to be obtained from the household head. As pointed out earlier, there are many reasons that husband, in particular, may not reveal their wives' occupations.

This difficulty can only be resolved through reference to women in the household, a solution which demands a rethinking and a reorientation to the approach and the administration of census data collection.

Census: 1983?

Having outlined the problems encountered in measuring women's economic roles in past Nigerian censuses, it remains to make suggestions for the future. It seems eminently reasonable, in the light of past evidence, to suggest that accurate results require direct response from the female population. Female enumerators should be responsible for obtaining information from female respondents. It is unfortunate that the only serious effort purposely to employ female enumerators was in response to the claims and counterclaims of fraud arising from the 1962 census. To check the accuracy of 1963 results,

> An exchange of enumerators between the states was agreed upon, and a team of women enumerators from Eastern Nigeria went to the North since men are never allowed into purdah quarters.
>
> (R. K. Udo, 1968, p. 102)

There were certainly a number of Northern women enumerators working in the last census, but their roles were the same as those of male enumerators.

One possible procedure in the North, although preferably throughout the federation, would be to divide the information required on the census questionnaire into two, with certain categories of questions to be answered by a male adult member of the household (if any), and others to be answered by a female adult household member (if any), approached by a female enumerator. Questions in sensitive areas might then be answered with greater accuracy than has been the case in the past. Responses to certain questions could be required of both male and female respondents, thereby providing a rough cross-check on the validity of the information being received. With the work divided, the male and female enumerators would cover the area which two enumerators would have covered individually; there would be no increase in the number of enumerators required.

We have used the term *household member,* rather than *household head* or *compound head,* because of the assumption of dependency relationships implicit in the concept of household head. If there is a man in the domestic unit, he is all too often assumed to be the head; women in the unit then automatically become his dependents. As B. Rogers points out,

> In many cases where women are officially classified as 'dependants' of a household head, it is clear that in fact they play a crucial part in the maintenance of individuals in that grouping, and that in some cases, the

> man classified as the 'head' might more accurately be described as a dependent from the point of view of productive activitiy (1979: 65)

It would be well to avoid any reference to a household or compound head in designing the census, in order to avoid this kind of prejudicial data.

Some consensus must be reached with reference to information regarding women's occupations. If, as seems to be the case, the object of the exercise in the first instance is to report an individual's income-earning work, then perhaps the best procedure would be to make that clear in the enquiry. Konan (1975, p. 14) simply asked worden, "How many ways of getting money do you have? What are they? Women's work can be perfectly and adequately described by women, and the categories of work used for analysis should be organised in the basis of the women's responses.

An effort should be made to deal with the question of unpaid family labour. It is interesting to note that work that seems to be categorised as *"unpaid family labour"* is that which usually result in the production of income (for the family head!).

> 'Unpaid family workers who are predominantly females . . are counted in most censuses among the labour force. . . However the criteria used in identifying them differ from country to country.' (*Womanpower, the World's Female Labour Force in 1975 and the Outlook for 2,000,* ILO, Geneva, 1975, p. 4 quoted in von Buchwald and Palmer, pp. 44–5).

There should be no time constraints of the kind included in the 1973 census instructions in recognizing women's unpaid family labour.

Finally, the use of the concept *'labour force'* should be discarded. It is an asymmetrical, discriminatory and valueless construct. All kinds of work should be equally categorized, and all categories of workers should be clearly seen to be contributing to the total economy. The odd man out, as it were in the labour force, is the housewife. Szalai notes,

> There are no male counterparts to housewives whose days are filled with unpaid work done for the household. Being unpaid, housewives are not regarded as part of the labour force and therefore cannot be called unemployed, especially as they are never really out of work. (1975, p. 7)

If unpaid family labour, often associated with farming and leading directly to income received by the household head can be perceived as work, then the alienation of women's labour in the domestic sphere which permits the husband to engage in other activities, and absolutely vital for the welfare of the family, must also be treated as work.

The economic activities of women are more extensive than those of men. They include women's own income-producing occupations, their unpaid family labour, and their unending and myriad of domestic responsibilities. A more equitable distribution of labour, and of the rewards of labour, can hardly be planned when available statistical data do not even recognize the present state of economic affairs.

Census information is one of the prime bases upon which government and private agencies frame short and long-term strategies and priorities. Every effort is being made to ensure that the decennial census of the 80's will be a success; this conference illustrates that concern. It is incumbent on us to make certain that the census questions, and the data obtained therefrom, are appropriate, accurate, and relevant to the Nigerian context. Only in this way may the information gained be immediately and effectively, utilized for the benfit of all Nigerians.

Notes

1. The result of this study may be found in Pittin, 1979.
2. This demonstration of high social status is the subject of a paper presented by Pittin in 1976. With the spread of education for women, especially among the elite, it is likely that the next generation of women will take up salaried employed; which confers still more status than no occupation at all.
3. Many women had more than one craft or trade. The criterion for establishing the woman's primary occupation was the woman's own evaluation.
4. Women in Yarinci practising these crafts were generally not concerned with remuneration, and were instead engaged in craftwork as an avocation. Crafts not engaged in for profit were not included among a woman's economic activities.
5. Most observers (e.g. C. Okonjo, 1968, pp. 79–82; I.I. Ekanem, 1972, p. 190; E. Van de Walle, 1968; and P. Hill, 1977, p. 19) considered the 1952/3 census to underestimate the total population. A few, such as R.M. Prothero (1956, p. 181) found the results to be acceptable, at least in terms of what had gone before.
6. Kano Division included 88% of the total female population in Kano Province. The other two Divisions were Kano Northern Division (12%) and Kano Township Division (less than 1%).
7. See M.K. Bashir, 1972, p. 11.
8. See, e.g. G. Nicolas 1975, p. 97 for Maradi, Niger; P. Hill, 1969, p. 398, for Batagarawa; and M.G. Smith, 1955, p. 115, for Zaria.
9. Overcounting is established by almost all writers, basing their analyses especially on comparative data of previous censuses, and the 1963 census, and on the obvious evidence of external pressures. C. Okonjo (1968) and I.I. Ekanem (1972) decided, on balance, that the 1952 census was an undercount (see footnote 5 above), and the 1963 census an overcount. P. O. Olusanya (1966) never quite committed himself regarding the relative merits and accuracy of the two censuses. R.K. Udo (1968), T.M. Yesufu (1968), and S.A. Aluko (1965) agreed that the 1963 census figures were certainly inflated, whatever the virtues or defects of the earlier censuses.
10. The 1963 occupation data is based on the population aged 15 and over. This harks back to a practice unused since the 1921 census.
11. Unemployed people are included in the labour force in the 1963 census.
12. Women are treated as a reserve agricultural labour force. Censuses carried out during the non-farming season (as is often the case) lose women's agricultural work. Men are accepted at their word as farmers, but women are subjected to this discriminatory time-related clause.

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14

Towards a Philosophy of Population Census in Nigeria: Remote Sensing Inputs

*J. Funso Olorunfemi,**

Introduction

ALTHOUGH the need and desire for an accurate census on which planning could be based has long been appreciated in Nigeria, little has been achieved in attaining this desire. Much of the demographic information about the society is obtained largely from population census and some occasional demographic surveys. These exercises suffer serious organizational defects which undoubtedly affect the quality of the resulting data. The census is largely faced with the problems of accuracy and completeness. Apart from the fact that the censuses are usually conducted at a fixed interval of time (usually ten years), there is considerable time lag between the data of the census and the publication of results. The rejection of the 1973 population census in Nigeria further worsened the situation in this country in which case heavy reliance is placed on the 1963 census for official purposes.

Similarly, if adequate care is not taken, statistics obtained from sample surveys may have their own limitations arising from size and coverage of the sample. The high rate of population growth and urbanization in Nigeria further stresses the need for accurate data for planning purposes. There is, therefore, an urgent need for the development of an adequate monitoring process of population for use in formulating plans. It is in the light of this that every well meaning Nigerian should appreciate the effort of the National Population Commission in organizing this conference on the Philosophy of *Population Census in Nigeria.* This paper is specifically concerned with highlighting some key areas where remote sensing would be of importance in formulating a comprehensive national policy on census in Nigeria.

Remote Sensing Inputs

Apart from containing the gross population figures the population census (defacto or dejure) contain other demographic information. While it is impossiole (at present) to achieve the latter through remote sensing, a good knowledge of the total number of inhabitants in any place provides a good background for further investigations.

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* *Dr Olorunfemi lectures in the Department of Geography, University of Ilorin, Nigeria.*

In general, remote sensing refers to the observation of a target by a device separated from it by some distance. When broadly defined it involves conventional aerial photography. Specifically, there are four main areas in which remote sensing can be an invaluable material to a population census.

These are:

1) Identification of settlements;
2) Settlement size and ordering;
3) Demarcation of enumeration areas;
4) Intercensal population estimation.

These we shall now consider briefly, with the hope that it will serve as a basis for further discussion.

Identification of settlements

Aerial photographs can be of particular value in the identification of settlements. The scattered nature of the rural population requires a monitoring system that will adequately record all settlements. A situation by which some settlements which had existed long before the 1952 census, and were omitted in the 1952/53 census (Ogunlesi, 1968) would be guarded against. This will no doubt reduce the cost of field work in terms of money and time of compilation of settlement numbers for the census proper. This procedure will be particularly more reliable if the time of photography, is designed to coincide with the period of minimum foliage. If this were an acceptable methodology, automatic identification of settlements (Reining and Egbert, 1975) could be tested and developed for Nigeria.

Settlement size and ordering

One major information that has been conspicuously ommitted in past censuses in Nigeria has been that of the land area occupied by each settlement. This can easily be calculated from aerial photography or other higher altitude imagery. Data on the area of any city if collected at regular intervals would provide information on urban land consumption rates and thus be helpful to town planners in the spatial planning of cities, and in estimating the demand for infrastructural facilities.

Apart from this it will be possible for Nigerian cities to be ranked in terms of their real extent. This ordering may in actual fact be an alternative data for settlement classification. A high positive correlation significant at 99 per cent level of probability exists between settlement ranking based on population from census and land area from serial photographs of some Nigerian cities (Olorunfemi, 1982). In addition, the census will now contain standard data on which population density can be calculated at the local, state and national levels in Nigeria.

Demarcation of enumeration areas

In Nigeria, where maps are seldom up-to-date, recent aerial photography, with its wealth of detail on streets and houses, can be a highly valued source in the planning and execution of a census. The enumeration areas (or districts) on which field data will be aggregated can be delineated from the photographs. These areas can be assigned to census officials who will collect the data in the field. Also the procedures for checking the field workers by team leaders can be organized on the photograph.

In this way, the problem of inadequacy of maps which hampered some past census in Nigeria (Duru, 1968) and the ambiguity of boundary demarcation (Ogunlesi, 1968) would have been eliminated. Since census is to be carried out at the same time in the country, proper planning of photography should be included in the main census.

Intercensal Population Estimation

The general role of remote sensing in population estimation and the potential use of the crowding index have been discussed elsewhere (Olorunfemi, 1980, 1981).

Remote sensing can provide data (e.g. dwelling units) which can be complemented with data from field surveys to generate population figures for the country. However, before this technique can gain universal acceptability, further research should be carried out in order to formulate appropriate methodological procedures for using remote sensing.

Even if censuses were regular and accurate, census taking is a very costly exercise, and so cannot be carried out as often as might be desired. In addition, census data are outdated soon after the exercise, more especially in radpidly growing areas where a population growth rate of over 100 percent (Aluko, 1965) is possible within a period of one decade. We should therefore develop a methodology of up-dating census figures intercensal estimate). Remote sensing will be an appropriate technique to use because of its speed.

Data from remote sensing can provide the gross population figures, while other demographic information can be obtained from sample surveys. The aerial photograph is of particular value here in the sense that it can serve not only as the source of information for the sampling (perhaps stratified sampling according to residential types), but also it makes the extension from a sample to universal possible because it permits the measurement of the size of both the sample area and the total area or counting housing units in both areas. This procedure of population estimation is obviously not as sensitive as the conventional method in Nigeria.

Need for Research and Conclusions

Although the procedure of population estimation through remote sensing is not as sensitive as the conventional method of population enumeration in Nigeria, it is hoped that the idea will be welcomed in good faith. A national population census should be seen as a technical rather than political exercise. To achieve this demands a great sacrifice on the part of not only the members of the National Population Commission but also those individuals who will be involved in any capacity in Nigeria.

With particular reference to remote sensing and population in Nigeria, adequate efforts should be made to provide answers to some pertinent quesions. In the case of the house counting technique, for example, one would wish to know its applicability nationwide. What is its level of accuracy and reliability? What correlation exists between a residential classification based on artefactual information from aerial photographs, and a classification of residential areas based on social and economic data from a survey or census? How homogenous is each class in terms of spatial distribution? What is the best operational definition of *residential?* For a particular area or region, what is the most suitable characteristic for measuring the size of a particular residential class? Is it the number of houses *per se* **or** the area extent of the house including the inner courtyards? What is the most appropriate technique of area measurement? Should the boys' quarters in most modern houses be treated as separate housing units or as extensions of the main building? How consistent are the interpretation and measurements from photographs by the same interpreter and a different interpreter? What are the kinds of errors made? What relationship exists between the area size from photographs and the corresponding population size? Can the results of previous censuses be employed to determine this?

At the end we have raised more questions than provided answers for. It is being suggested here that more research should be funded in this area for further development of remote sensing in relation to population census in Nigeria, and *now* is the time.

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15

Steps, Relative Timing and Evaluation in the Population Census

Joseph Uyanga

Introducation

IT HAS become almost *traditional* among writers to criticise and condemn all Nigerian population censuses. According to some writers (Adegbola, 1980, Ekanem (1972); Aluko (1965); (Udo, 1968) the Nigerian Census always suffer from:

(1) poor and inadequately financed or staffed methods of collection and/or colation.
(2) suspicion, resentment and/or ignorance of censuses on the part of the population (or segments of them) being enumerated.
(3) false statements, especially of age, occupation, income, personal characteristic and qualities of individuals in the population.
(4) constant changes in mobility of the population through migration and in the number and sizes of the enumeration areas.
(5) omission of areas in some population groups during the enumerations.
(6) political implications of the census figures leading to falsification of records, technical and organisational manouvres, political interference, and fradulent acts to gain regional advantages.

Nigeria has had several censuses none of which has been regarded as reliable.

The 1973 census exercise had been described as the most scientific census ever carried out in the country (Adegbola 1980). This is so because for the first time there were unprecedented elaborate preparations for the exercise.

Following Adegbola (1980), the following procedures were designed:

(1) Publicity for the census was to emphasize socio-economic planning rather than politics, as the sole aim of the exercise. It must be noted here that no impression was given nor can this be given in future that the distribution of amenitites will not be based on the census.

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* *Dr. Uyanga lectures in the Department of Geography at the University of Calabar.*

(2) Census documents to be canvassed in the field were developed to provide built-in checks and quality control.

The NOC 19–Enumeration Area Description and Map which contains the sketch map and the description of each enumeration area. This ensured that all parts of the country were covered and assinged to an enumerator. The main census questionnaire (NOC 1) that emerged after three pre-tests (the last being a trial census) and each of which was filled for a household, sought information on: name, relationship to head of household, sex, age, marital status, religion, ethnic origin/nationality, language(s) spoken, literacy, school attendance, educational attainment, occupation and industry. A third document, the House List form (NCO 5), was used to collect particulars of housing. The enumeration of houses was undertaken before and indeed as a check to the census of the population. The idea was that all things being equal, the number of households on NCO 1's should match the number of NCO 5's. Any deviation would imply inflation or deflation. In addition to these important forms, provision was made for checks on the field by supervisors and enumerators for coverage. However, Adegbola (1980) indicates that in several areas not all the households listed on NCO 5's were enumerated on NCO 1's and vice versa. This led to the inflation and inadequate coverage which the document was meant to avoid. Low level of. literacy; and indolence among the enumerators, official lethargy, and poor supervision have been indicated as the sources of the failure in this particular respect.

(3) Enumeration was to be by sight. All persons present in a household at the time of the enumerator's visit would be counted at the household. If any member of the household was temporarily absent at the time of the enumerator's visit, he (the enumerator) would leave a call-back card and on calling back he would enumerate the person concerned if only he had not been enumerated once. Special arrangements were made for the enumeration of persons living in institutions, of the homeless and the nomadic population, of women in purdah and of enumerators and supervisors themselves.

(4) A multiple-member enumeration team was responsible for each enumeration area, one apparently acting as a 'watch' on the other to prevent inflation. During the main census the team consisted of two members, a civilian enumerator and a member of the armed forces. During the post enumeration check, the team was made up of local enumerator, a non-local enumerator and a member of the disciplined forces.

(5) The thumb of the person enumerated was dubbed with an indelible solution by the soldier-enumerator as a proof that the person had already been counted. (The solution however was not as indelible as expected, it could as well be imitated).

(6) At the end of a visit to a household, the enumerator was to close the questionnnaire by drawing a line below the entries of the last person enume-

rated in the household and by date-signing below the line.

(7) Arrangements were made to ensure that:

- (a) NCO 5's reached the National Census Board Secretariat in Lagos by November 16, 1973, that was to be two weeks before the commencement of the head count.
- (b) NCO 1's reached Lagos latest by December 16, 1973, that was to be two weeks after the end of the count.

(8) Efforts were made to recruit and train the best available personnel for the exercise. Emphasis was on recruitment of Local people of at least primary school education because of the obvious advantages that they would know their way around and be known to the people.

(9) The census was to last seven days starting at midnight of 24–25 November, 1973. An extension of one day was later granted by the Head of State to ensure complete coverage especially in urban areas.

(10) A Post-Enumeration Survey was planned (at first for January 1974 and later for April 1974) as an integral part of the census to measure the level of accuracy of the census.

As elucidated by Adegbola (1980) these pre-census arrangements did not guarantee accuracy. He further went on to show that according to the Report of the Census Board, validation tests revealed serious errors in the 1973 census.

The Nigerian Census Board and now the Population Commission seem to have indicated that "they have heard enough of these", and so asked "what do we do next?" The intention of this short paper is to contribute to what ought to be done next. Because most of the papers in this conference, I presume will dwell on the methods of enumeration, in subsequent censuses, this paper will consider the pre-census exercise preparation and the post-exercise evaluation of the output.

Preparatory Planning

Preparing for a census exercise depends on the nation's perception of the census. Basically a census can be regarded as

- an administrative exercise
- a political exercise
- a socio-economic exercise
- all of the above.

It can also form a basic instrument in a population policy. In China for instance since the adoption of the "one child' population future, the censuses are seen as a way of appraising the successes of the zero-population growth policy.

Nigeria has no-*defined* population policy. It sees population as the most precious resource. There stems the problems of our censuses. Nigeria regards the census as an *ad hoc* exercise to be carried out by the government. That is why we will continue to have problems.

> There is probably no well defined official policy towards demographic statistics, although the National Manpower Board and the Federal Office of Statistics undertake occasional labour and household surveys. The apathy towards demographic data collection is reflected in the *ad hoc* nature of the organization for all the censuses that have been taken to date in the country. The inevitable problems which such *ad-hoc* arrangements generate are manifold.
>
> The first is the delay in procuring fixed and movable assets needed for the exercise. The census secretariat was not completed until September 1973, barely three months to the date of the count. According to the Chief Census Officer, the delay in completing the buildings affected the recruitment of personnel to man them and led to delays in preparatory work. The few officials who were appointed had to contend with inadequate temporary accomodation affected the efficiency of the functionaries is not known that the Logistics Officer could not set up his department until July, 1973 and the Logistics Officer could not participate in the trial census because the office was not sufficiently equipped. Equally serious is the delay in printing census documents and their late dispatch to the field. These forms must have arrived late and/or mis-distributed, judging by the general complaint of insufficiency of the NCO 1 forms barely two days after the commencement of the exercise.

The *ad hoc* approach to census implies that there is no permanent institution charged with the responsibility of census-taking, so that census taking is treated as an administrative exercise. A census operation is the work of professionals who should have been given sufficient exposure to the practical aspects of census-taking and whose task is not only census-taking, but also research into methodology, procedure and problems of demographic statistics and conducting of annual, quarterly and monthly demographic surveys of various forms. The absence of such a body of professionals in Nigeria is reflected not only in the frantic search for experts during censuses, but also in the recruitment of non-specialist 'experts' to perform some crucial tasks in the census with disasterious consequences.

The country should seriously consider legislation to provide for a non-political body to conduct the census and gather other statistics,—an institution which is an autonomous, professional, non-government body, independent to arrange, conduct and define its data collection systems outside the existing government framework.

The census is a massive exercise. The UN recommends that such an exercise requires at least three years of planning and execution. Compare this with the eighteen months taken to execute 1973 census. Whatever method is chosen, the exercise succeeds to the same extent, as enough prepatory groundwork done. Preparatory work includes the production of the necessary maps, printing of the questionnaires, planning the steps to be taken in the recruitment, training and supervision of personnel. Most important, with regards to Nigeria is the logistic arrangement which will ensure the delivery of men and necessary materials in the right places and right time.

The topics to be covered should be determined in the light of international standards and national needs, but in the case of Nigeria, success in the collection of only a few and significant set of data will be very important. In the light of the fact that Nigerians are often reluctant to provide accurate information about their families, the shorther the questionnaire the better.

Evaluation of Results

Since post-enumeration checks normally employ a more rigorous method than the actual count, it is a very valuable means of evaluating a census result. According to the United Nations (1967: 19) a good census practice requires a careful consideration and evaluation of the completeness and accuracy of the census results. There may be errors in coverage and in content. Evaluation may focus on either the data of the census or on the published statistics.

The most intensive methods of evaluating coverage are in terms of age-sex groups or of age-cohorts. The attendant observation will concern the net error by age and the differentials among age-sex groups, such as the tendency towards relatively great under-enumeration of infants and very mobile adults. These may be the results of omission, duplication, falsification or misclassification.

Errors in classification can either be random or exhibit a systematic directional bias. In the case of 'age heaping' on preferred terminal digits, for example 'O and '5', these can be adjusted through standard mathematical procedures (Coale and Demeny, 1966; United Nations 1976, Brass *et al* 1968).

To be specific, the following methods of evaluating census coverage have been known to be useful for most countries.

- re-enumeration
- comparison of successive censuses
- check against independent aggregates.

- internal consistency within a single census
- matching against individual records
- post-enumeration sample survey
- a combination of methods.

Re-enumeration is always essential particularly if some areas are found to have been poorly enumerated. In this case the new figures replace the old ones, the exercise is different from the post enumeration surveys, which are conducted on a sample basis for purposes of estimating undercoverage.

Evaluation through successive census comparison consists of demographic analysis of the population by age and sex at the last census and projecting it to the date of the given census by means of the balancing equation. Comparisons of the expected with the enumerated numbers yields estimates of consistency between the two censuses. Where accurate vital statistics are not available, use can be made of techniques inherent in the assumption of stable and quasi-stable population analysis, (Siegel, 1974).

A check against other independent aggregates is possible where the statistics of other demographic data system, like the pension schemes or medical statistics are virtually complete. Estimates of the level of accuracy of the census population and sub-population can be made.

Matching studies concern the matching of individual records from two data sources as opposed to the comparison of statistical aggregates. It yields estimates of gross-differences–erroneous ommisions and inclusions–rather than merely net differences. Matching names from the census against those in another file can be useful in generating a list of names that is more complete than either source alone. There are of course problems in determining whether in fact a match has been established. Both false positives and false negatives affect the estimate of the accuracy. Matching studies can be used to estimate the accuracy of both census coverage and census content, although in the case of comparison of characteristics from the two files only, consistency can be measured.

Conclusion

The nation should adopt a long term perspective on the issue of population data. This should be based on a defined population policy and invested in an autonomous non-government institution. The instituion should be free to do its own thing without government directives and interferences, with executives made up of professionals, and non-state representatives.

Any system of data collection should be an indirect one. The rural demographic sample survey carried out in 1966 was successful because it has no direct political functional and utilitarian use to the state governments. Thus, a census will be depoloticised if it is carried out not as a 'census' but as a survey of something else, by a non-government body.

No matter the system adopted, enough preparatory arrangments should be made and completed several months before the exercise. Evaluation is necessary to generate confidence in the data. If possible this too should be published.

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16

Census Taking in Nigeria: Lessons From the Past and Strategies for the Future

Abubakar Katcha

Background Information

THE ACTUAL population of a country can be ascertained only through an enumeration of the people living at a given moment in that country. All figures obtained by other means other than a genuine, all–inclusive census are estimates or guesses (Kuczynski 1937: vii). The proportion of the Nigerian population which actually has been enumerated before 1911 is a very small fraction and has been confined to one area of the country. Lucas and Williams (1973:2) stated that although censuses have been taken in Nigeria since 1866, those before 1911 did not extend further than a few square miles around the city of Lagos. The population figures obtained from these earlier attempts to enumerate the people are often stated to be the census results, although they are based in part, on estimates or guesses. Ekanem (1972:39) noted that only in the major cities, was there a house–to–house enumeration during the 1911 Nigerian Population Census which covered the whole country. For all other areas covered in the census only estimates were made. Ayeni (1974:5) quoted Kuczynski as making similar remarks, i.e. that with the exception of the 1952 and 1963 counts, the figures obtained from earlier counts were based mainly on estimates and guesses. Lucas (1976:24) said that in view of the Aba riots of 1929, any plan to actually count the population of the Eastern Region was abandoned and the 1931 Census of the East was a mere compilation of existing data.

Lagos Population, 1871–1901

The total population recorded in decennial censuses taken in Lagos between 1871 and 1901 is given in table 1 below.

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* *Mr Katcha works in the Ministry of Economic Development, Minna, Niger State.*

Table 1 LAGOS POPULATION, 1871–1901

Year	Population
1871	28518
1881	37452
1891	32508
1901	41847

Source: R. R. Kuczynski, *Colonial Population, Oxford University Press, London, 1937*

The accuracy of the total population recorded in these various censuses varied in quality. In these early days, for example, the census takers were colonial administrators who lacked the expertise. Kuczynski (1937:x) noted that colonial censuses did not at all improve automatically, because a permanent census staff hardly existed in any colony. Such census officials were also handicapped by lack of requisite facilities as well as financial support. Indeed, in Nigerian during this period the census cost as low as one-quarter of a farthing per head. These factors could explain the method employed for Lagos. For instance, while the method of enumeration in 1881 was *de jure* that of 1891 was *de factor*. Thus the results in the two censuses are not strictly comparable. Owing to the considerable migration into and out of Lagos, the de-jure population may easily exceed or lag behind the de-facto population, as can be seen in the results of 1881 and 1891 census figures shown in table 1. The enumerators' pay in 1891 census of Lagos was based on the number of persons counted, but this arrangement was altered in 1891 to a fixed wage. As a result, at the beginning of 1891 census there was enumerators' strike and the census work was done without enthusiasm This resulted in an error also of about 5.3 to 10.0 per cent (Brooke:1933). Finally we can consider the efforts of census taking in these early days as rough estimates of population.

Nigerian Census 1911–1931

We noted in the introduction that the first Nigerian population census outside the Lagos area was conducted in 1911. The motive was the existence of plan by Great Britain to take the census of the whole of her vast empire including Nigeria. Since 1911, series of decennial censuses have been taken in Nigeria.

The census of 1921 was the first attempt at a properly controlled population count in the decennial series. The census was taken in two parts (a) Main Township and (b) Provincial areas (Ekanem: 1972:40). Thirteen townships were covered and the enumeration was completed in one day. The provincial enumeration lasted for two months. The enumeration in the Southern Nigeria lasted for two months. The enumeration in the Southern

Nigeria was confined to enthnological and historical enquiries. The classification of data collected for the north showed man-adult population (0–14 years) as well as statistics dealing with the occupation of people, their religion and the extent of their education. This information is not available for the southern parts of the country. Thus, the classification of the data collected also differed in each of the regions of Nigeria.

The 1931 census was hampered by the great financial depression during the period. In the Northern region there was locust invasion which resulted in most of the limited administrative staff being absorbed in anti-locust duties to the deteriment of the census plan. During this period, the people of the East strongly resisted attempts at taxation or measures such as a census, which appeared to be directed towards this end. Thus, fear of female taxation as a result of enumeration was part of the cause of the 'Aba' riots involving parts of Owerri and Calabar Provinces. Hence 1931 census enumeration only took place in Lagos and in five township and 201 villages in the North. For some 96 per cent of the indigenous population of Northern Nigeria and 90 per cent of that of Southern Nigeria, the figures were obtained from existing records. Table 2 summarizes the available information on Nigerian census held between 1911–1931.

Modern Census of Nigeria–1952/53–1973

The Second World War interrupted the decennial census series in Nigeria, and no census was taken in 1941. However, by the end of 1940 the need for more recent population data than that of 1931 was felt. A decision was taken in 1949 to take the 1950 census of Lagos only as it was considered that it might be politically impossible to take a census of the whole country. Fortunately, after the experience of the successful Lagos Census of 1950, a census for the whole country was planned. This census took place in 1952/53. As Lucas (1976:24) put it, the success of the 1950 census enumeration of Lagos encouraged the government to undertake a comprehensive national census in 1952/53, when Lagos was included as a part of the Western Region

The 1952/53 Census

The 1952/53 census, which was the first reasonably scientific census in Nigeria, was carried out over a period of one year in different parts of the country. The census was conducted in three distinct phases. The Northern Region (including Lagos) was covered in December, 1952 while the enumeration in the Eastern Region took place in June, 1953. It is evident from the above that the 1952/53 census of Nigeria infringed upon one of the essential features of census taking–simultaneity. There were migrations of people during the period of counting, the scope and extent of which were unknown. The general view is that the 1952/53 census was an undercount. Lucas, (1973:3) writes that the 1952/53 census is generally believed to have been affected by undercounting, by as much as 19 per cent. At the same same, although its age distribution has been used to estimate the level of Nigerian fertility (for instance Van de Walle 1968: 515–527) and others the irregular classification of age groups under 2, 2–6, 7–14, 15–49 and 50 + failed to conform to international standards and is not useful for most demographic studies.

Table 2 Distribution of Population of Nigeria By Regions 1911–1931

REGIONS		POPULATION (000)	
	1911	1921	1931
NIGERIA	16,954	18,720	20,056
NORTH	8,129	10,560	11,440
EAST	4,500	5,110	4,550
WEST	3,360	2,950	3,940
LAGOS	74	100	126

Source: I.I. Ekanem, 1972 *The 1963 Nigerian Census: A Critical Appraisal*, Table 2.1, p. 40 Ethiope Publishing Corporation, Benin-City.

Note: The East, West and Lagos together constitute Southern Nigeria (See text on Nigerian Censuses 1911–1931).

Nigeria's First Post–Independence Census

By October, 1960, when Nigeria became independent, it had become evident that the information obtained from the 1952/53 census was out–of–date and in many cases unsatisfactory. Accordingly, a comprehensive programme was mounted for a census in May, 1962. The actual count took place between the 13th and the 27th of May, 1962. The restricted period overcame the lack of simultaneity which had been a major limitation of 1952/53 census. Events arising from political manoeuvres rendered the figures derived from 1962 census unacceptable and as such were rejected. Lucas (1973:3) indicated that because of the importance of population figures in the distribution of seat in Parliament and in the allocation of federal grants, the 1962 census assumed considerable political significance. After claims and counterclaims concerning inflation in particular areas, the 1962 census was nullified, and the results were never officially released.

The 1963 Census–the Official Record Census:

The experience obtained in the 1962 census was utilized in the recount in 1963. Thus, the 1963 census administrative organization and scope followed closely that of 1962. However, a new Central Board was set up (instead of the regional census boards) and was headed by the Prime Minister (Ekanem 1972:44) The new census board was made up of federal and regional representatives all working under the direction of the Prime Minister. The enumeration took place within four days 5th–18th November, 1963. A recount in 1963 was accomplished at a cost of 2.5 million pounds (now ₦5 million) as against 1.5 million pounds (₦3 million) for 1962. The results of this count which gave a total population of 55.7 million, also became the subject of considerable criticism and controversy (Lucas 1973:3). Olusanya (1973:56) cited Udo and Yesufu as saying that because the 1963 census exercise was marred by political interference the users were sceptical about its validity and reliability.

Comparison of 1952/53 and 1963 Censuses

A comparison of 1952/53 and 1963 census in table 3 shows an unexpected large increase of population. The 1952/53 census put the population of Nigeria at 30.4 million while the 1963 census reported the population of Nigeria at 55.7 million. Accepting the two censuses, Nigeria then added 25 million to her population in ten years. This implies a 6.0 per cent annual rate of increase. This increase is impossible in a country where international migration is negligible. Statistical evidence from 1952/53 and 1963 censuses that suggests that both censuses are defective in the survival rates for 1963 based on 1952/53 and 1963 censuses. In table 4 the 1952/53 and 1963 survival rates were adjusted according to some broad age groups and the cohorts are compared. The ratios calculated for the population aged 10 years and above in 1963 were males 1.2372 and females 1.2406. The probability of such inflated ratios may be either the 1952/53 censuses were deficient, or the 1963 census was inflated.

Table 3 **Percentage Increase and Annual Percentage Growth Rate 1952/53 and 1963 Censuses**

REGIONS	POPULATION (000)		Intercensal % Increase	Annual % (a) Growth Rate
	July, 1952	Nov. 1963		
NIGERIA	30,402	55,670	83.1	6.0
NORTH	16,835	29,809	77.1	5.7
EAST	7,215	12,394	71.8	5.2
WEST	4,954	10,266	123.4	7.4
MID-WEST[b)]	1,491	2,536	70.1	5.3
LAGOS [c)]	267	665	149.1	9.1

Source: I.I. Ekanem (1972) *The 1963 Nigerian Census: A critical Appraisal. Table 4.1, P. 72 Ethiope* Publishing Corporation, Benin City, Nigeria.

Note: (a) The intercensal interval for the different regions varied since the 1952/53 census was taken at different times.

(b) & (c) The population of the Mid-Western Region, which was made up of Delat and Benin Provinces and Lagos City, was extracted from the 1952/53 Census of the Western Region.

Table 4 **Survival Rates Computed from Censuses of Nigeria (1952–53 and 1963**

Age group as of 1953	1952–53		Age group as of 1963	1963		Survival Rate	
	Males	Females		Males	Females	Males	Females
0–6	4,371	4,117	10–16	4,262	3,691	0.9751	0.8965
7–14	2,693	2,149	17–24	4,648	5,510	1.7260	2.5640
15–49	7,203	7,528	25–59	9,008	8,624	1.2506	1.1456
50+	1,124	1,232	60+	1,122	815	0.9982	0.6615
Total	15,391	15,026	—	19,040	18,640	1.2372	1.2406

Source: *A. Katcha,* "An Assessment of the Nigerian Rural Demographic Survey 1965–66" Table 2.1 Cairo Demographic Centre.

1973 Census

Before the 1973 population count some writers (for example, Okediji 1973:13) on the problems of census taking in Nigeria were hoping that the 1973 census will not contain some of the previous flaws identified with earlier censuses. Unfortunately the 1973 figures also became the subject of controversy and because there were doubts about its accuracy, the 1973 census was nullified and the detailed results were not published.

The Planning, Organization and Administration of 1973 Population Census

The Report of the 1973 Population Census of Nigeria (National Census Board, Lagos: Report of the 1973 Population Census of Nigeria, 1975) follows the outline of the report of the United Nations' recommendations of systematic recording of census experience in Part II of Principles and Recommendations for the 1970 Population Censuses'. United Nations 1969

Legal authority for the census operation : The Nigerian Statistics Ordinance (Cap 193 of 1957) authorized the taking of census from time to time and provides for collection, compilation, the analyses and publication of statistical information and connected matters. However, for the purpose of controlling and supervising the 1973 population census, a National census Board was set up by decree in June, 1973 known as *National Census Decree 1973.* The Decree, of course, was to take effect from April, 1972.

Census budget: The sum of ₦36.9 million was allocated by the Federal Government for the 1973 National Census operation. At the monent only the financial report covering statements of allocations of account on National Population Census from 1973 to 1975 is available. The actual expenditure figure is not yet available (*1973 Census Report:* 17).

Census calendar: For effective census planning a census calendar is necessary to ensure that every aspect of the exercise is included in the plan. The first calendar for the 1973 population census was drawn up in June, 1972 and covered.

- census preparatory work
- enumeration area demarcation and
- mapping and cartographic

work. The census calendar was revised from time to time. Many difficult problems led to delays in executing calendar programmes on schedule. For instance, due to lack of census accomodation, there were delays in the recruitment of personnel and consequently the census work could not take off on time and the demarcation exercise could not be completed on schedule (1973 *Census Report:* xiii).

Administrative Organization: At the national level the National Census Board was established. The census Board consisted of members drawn largely from the federal and state public services with representatives from the armed forces, the police services the universities, the chambers of commerce and the labour movement. The Board was headed by a chairman, a retired chief justice of Nigeria. The Board functioned from two main divisions, the census office and secretariat. The census office which was the technical wing of the Board was headed by the chief census officer, the then federal chief statistician. The secretariat was under the secretary to the Board and was responsible for the general administration of the affairs of the Board.

At the state level, the state census offices were established to handle both the administrative and technical aspects of the censuses. Each of the state offices was headed by a state census officer. Administrative officers were generally assigned to this job. We have earlier noted the problem of early census taken by colonial adminstrators who lacked expertise. Such problems are still among the contributory factors to Nigeria's failure, so far, in census taking.

The Demarcation of Enumeration areas: The first stage of 1973 field operation is the demarcation of the entire national territory into enumeration areas. A total number of 116,028 enumeration areas were demarcated. These figures represent the number of enumerators required as one enumerator was expected to cover only one enumeration area during the actual population count of about one week duration.

The concepts adopted for 1973 census follow the United Nations recommendations to ensure international comparability of the data. Also in the 1973 census, as in the previous census, the concept of de-facto enumeration was adopted.

After the field tests, the 1973 census obtained information on the topics listed in table 5. The items covered by census schedules in different censuses are also shown in table 5. As can be seen in table 5, the 1973 census schedule was much wider in scope.

The state census officers were responsible for the training of all cadres of officers in the state. In carrying out the training programmes they were assisted by the staff of national headquarters, and their immediate assistants who were trained in Lagos.

The actual Population Count

The population count started on schedule at midnight on the 24th/25th November 1973, and the enumeration was completed on 2nd December, 1973. To ensure honesty and accuracy, a number of precautions were taken. These included the participation of soldiers in the enumeration exercise, as well as dubbing the thumb of each citizen with indelible ink to avoid over-counting. However, as was ealier noted, the results of this count, which gave a provisional population figure of 79.76 million, were doubted. The late Head of State *(Selected Speeches of General Murtala R. Mohammed 1976:2)* remarked that with regard to the 1973 population census, that whatever results were announced would not command general acceptance throughout the country. It was therefore decided to cancel the 1973 population count. Thus, the 1973 census was nullified.

Table 5 Items Covered by Census Schedules (1871–1973)

Summary and Recommendations

In the foregoing an attempt has been made to provide some information on the censuses taking in Nigeria which started in the middle of 19th century. It is also evident from this paper that it has never been easy at any one time to count the number of people in Nigeria. Although census covering the whole country were taken in Nigeria beginning from 1911, only two can be regarded as useful for any national demographic study namely the 1952/53 and 1963 censuses, even though these two are also deficient in many respects.

What is to be done?

Unless something is done to depoliticise the Nigeria census, there may be no hope of having successful censuses in the country. Morah, Adekunle and Adekunle (1979:24) have made a number of recommendations with respect to future censuses. Such recommendations include depoliticizing the census through adopting a comprehensive system of population education for the masses–the politicians and census personnel, development of a system of distribution of amenities that is independent of the population of the component parts of the country and instituting an organizational framework and logistics of census taking that would transcend interstate or interethnic rivalries. We agree with such ideas put forward. However, while all these important issues are discussed they are sometimes not given the emphasis they deserve. For example, it is not sufficient to say that the development of a system of distribution of amenities that is independent of the population of the component parts of the country would presummably neutralize the tendency of politicians and the general public to falsify census figures for economic gains. A fuller discussion of the development of such a system must be given. The Aboyade Revenue Commission took the first major step towards this end, but unfortunately, his report was criticised as too technical and his recommendations thrown away by politicians.

We do recognize that the development of such a system would not be all that simple. It is obvious that because of the prominence accorded to the population factor in various revenue sharing schemes, it has become one of the most explosive political issues in Nigeria since independence. De-emphasis of the principle of population in its raw from in revenue allocation formulae which had been politicized over the years was the concern of some states in Nigeria in their memoranda to the Okigbo Presidential Commission on Revenue Allocation (1980: Vol. III). The Niger State expresses its concern in the following terms:

> Controversy over the population principle as a criterion for revenue allocation arises primarily on two grounds: The reliability and accuracy of Nigeria's population statistics and the relevance of population head count in its raw form. While we are aware of the deficiencies in the former, our objections to the population principle on that account is secondary. We object to the use of population figures in its raw form on the ground that such figures would not efficiently reflect the fiscal needs of the States for their development purposes. It is an indisputable fact that development boils down to people. This pre-supposes some correlation between developmental needs and population figures. But this is a simple relationship. It is very unscientific and rather too simplistic to assume a linear and highly positive correlation between developmental fiscal needs of a people and their absolute number as the proponents of the population criterion are want to do.

Niger state Government went to say the need of population of any given area is a function of both space and time. Their developmental needs in respect of education, health, water and clean environment would depend on the existing level of such services. The needs of such areas would also depend on the rural-urban mix of the population, as well as their spatial distribution.

A state with a large and sparse population distributed all over the place requires a special fiscal effort to bring the fruits of development to the people. The Government's development resource needs would therefore be more than a mere linear function of the size of the population. And in that case, population principle would have provided a poor proxy for development need. On this account, we reject the use of raw population figures as criterion for revenue allocation.

Indeed proponents of the population principle are noted for thier concern with the size of the population rather than the more relevant characteristics, such as the use of some socio-economic indicator–number of schools and school enrolments, health institutions and other infrastructional facilities. We are convinced that development efforts in terms of resource input is not merely a function of population size. Such efforts are crucially dependent on relevant population characteristics and the use of socio-economic indicators will serve much more efficiently and justly what the proponents of population principle want raw population figures to serve. And we believe such an approach would go along way in neutralizing the tendency of politicians and the general public of falsify census figures for economic and political gains.

On the sharing of federal seats by states on the basis of population, if states are legally and constitutionally equal, then a system of equal states representation at national assemblies will give politics of population count a decent burial once and for all. Such a system of equal state representation is already in practice in setting up some federal government bodies such as the National Population Commission, the Federal Electoral Commission and so forth.

On publicity, there is need for some form of enlightenment to be able to carry out the census exercise successfully. This will involve the adminstrative organs of the government. Having a strong team of component technical census personnel is no excuse for a weak census adminstration. It will require the local government secretaries, emirs, chiefs, district and village heads to be carefully appraised and educated on the importance of census as one of those programmes intended to contribute to the social and economic development of the country, the success of which required the fullest cooperation and enthusiasm of everyone. The duty of carrying out the task of appraisal the responsible authorities would seem to be that of national and state publicity committees. In addition there is need for each local government to form a census committee to deal with all aspects of census in the local government. When properly and adequately educated it will not be difficult for the local government to carry out this function. When these essential administrative steps are taken people will be more willing to accept population enumeration as a tool for planning. Indeed taking such essential administrative steps contributed largely to the success of a demographic

Table 5 **Items covered by Census Schedules (1871–1973)**

Item	CENSUS						
	Lagos 1871 Nig. 1911–1922	Nigeria	Lagos	NIGERIA			
	1871–1921· (1)	1931 (1)	1950 (1)	1952/53 (2)	1955 (2)	1963	1973 (4)
Name	x	x	x	x	x	x	x
Relationship to Head of Household							x
Sex	x	x	x	x	X	x	x
Age	x	x	x	x	x	x	x
Marital status	x		x	x	x	x	x
Religion			x	x	x	x	x
Ethnis origin/ nationality		x	x	x	x	x	x
Home place/ Birth place		x	x				x
Languages spoken							x
Literacy/edu-cation		x	x	x			x
Employment status							x
Occupation		x	x	x	x	x	x
Industry		x	x				x

Sources: 1 Eigbefor A. A. *A demographic study of Lagos City:* M. Ph. Thesis, Cairo Demographic Centre, 1974.

2. Federal Office of Statistics: *Population Census of Northern Region of Nigeria, 1952.* Apendix c—The Census Schedules.
3. *Population Census of Nigeria, 1963 Northern* Volume II Federal Office of Statistics, Lagos.
4. National Census Board *The Report of the 1973 Population Census Board of Nigeria.*

study of Niger State. (Katcha, 1978:10).

In the case of enumeration areas (E.A.), the 1973 demarcation of rural E.A.'s on the basis of 500–800 people and urban E.A.'s having a population of between 800–1000 people resulted in many rural E.A.'s in some states to be too large for an enumerator to cover during an enumeration period of about a week. This is because in some states settlements are scattered all over a large area in contrast to some states where we have rural concentration of people.

We feel that a State like Niger with a relative population ratio of 2 percent and relative land area of 8 percent where the population is scattered requires more E.A.'s and logically more enumerators to reach and enumerate all the people of the State. Compared to States like Kano, Oyo, Imo, which have relative population ratio of 10 per cent, 9 per cent 7 percent and land area of 4 per cent and 1 per cent respectively, Niger State or any sparsely populated state will require more enumerators to ensure complete coverage during an enumeration period. In sum, in order to ensure complete coverage of an E.A. during an enumeration period, cognizance has to be taken of population density and the spatial distribution of the population of states in future enumeration area demarcation exercises.

Finally, the political environment prevailing in the country is of the utmost importance for a successful census exercise for census is subject to political interpretations. Thus, census should be taken when Nigerians are ready for it.

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Discussion V

RAPPORTEUR'S REPORT FROM DR A.O. OKORE

Towards a Meaningful Set of Population Census Data

1. "Statistical Optimization and Census: Possible Alternatives"
Dr M.C. Duze and K. Agori-Iwe.

Comments

The Honourable Commissioner (NPC) for Anambra State, Dr Nduanya asked the author for clarification on the difference between enumeration areas (EAS) and the multiple clusters.

Professor Desai questioned the idea of employing two agencies for census-taking, pointing out the possibility that the two agencies could come up with two different results. Mr Carrena asked for further explanation of the model presented by the authors.

Response

Dr. Duze and Agori-Iwe noted that in their model, the EAs were to be used as the basis for primary selection. They did not visualize any problems in employing two groups to take censuses, since they would be using the same instruments and the final results and analysis would be undertaken by the National Population Commission.

2. "Census Measurement of Female Participation in the Nigerian Economy Past and Future".
Dr Renne Pittin

Comments

Dr Nduanya agreed with Dr Pittin that there was need for reclassifying the occupation of women to encompass the numerous economic activities performed by women, but which are, perhaps inadvententhly ignored. The Honourable Commissioner for Kano State. Alhaji Shehu Ringim observed that there are relatively few qualified women who could he employed to help enumeration. Dr Uche noted that by stressing women alone Dr Pittin tended to overlook the fact that in censuses the focus is on the entire population. Alhaji Tukur M Baba observed that Dr Pittin ought to have gone a little further to analyze the reasons for the disadvantaged position of women in the North. This would help the Population Commission to work out possible solutions.

Response

Dr. Pittin felt that a reasonably large population of women in Northern Nigeria had developed considerable awareness of public issues and could effectively assist in interviewing or enumerating their fellow women. To buttress her assertion, she noted that in the Katsina district, women turn-out in larger numbers than men to vote. In response to Dr Uche's comments, she noted that the central issue in her analysis was that women should be given a fair chance in labour force participation.

3 "Towards a Philosophy of Population Census in Nigeria: Remote Sensing Inputs".

Dr. J. F. Olorunfemi.

Comments

Dr O Akinkoye wanted to know whether there is any difference between the remote sensing technique and aerial photography. He observed that aerial photographs of Nigeria in the past were blurred. He further wondered whether population characteristics could be derived from remote sensing. Mr Ogunlade (NPC) wondered if population estimates could be derived from remote sensing and how useful such estimate could be. Dr. Ogbonna pointed out that the remote sensing technique has been further perfected in recent times to overcome the problems of weather and thick forestation. He noted that there was need to employ improved technology and expertise in the area of remote sensing. Dr. Uche wondered how the number of people within households could be determined from area sensing techniques.

Response

Dr Olorunfemi agreed with Dr Ogbonna that improved technology in remote sensing has minimized the problems posed by weather. In response to Dr Uche, he noted that aerial photography was only an aspect of the technical aspects of census-preparation. The characteristics of the population could be collected through surveys and so on.

4 "Steps Relative Timing and Evaluatin in the Population Census"

Dr Joseph Uyanga.

Comments

Dr Nduanya wondered why the period for planning the census was restricted to *three* years. The Honourable Commissioner from Cross River, Major N.J.A. Udoiwok stressed the role of the mass media in generating the kinds of awareness which would ensure that the census exercise was a success. The press should be constructive rather than destructive in their comments about the role of the National Population Commission. An enormous amount of groundwork needs be done before a census, and this requires large sums of money. Dr Uche, disagreed with Dr Uyanga that Nigeria has no population policy. He referred to the passing comments on Population in Nigeria's development Plans since 1962. Dr Orubuloye suggested that the institutes of higher learning should be closed during the census period in order for the students and staff to be available for mobilization for the census exercise. The available manpower resources from these institutions were of high quality.

Response

Dr Uyanga observed that, by and large, the planning period for a census was limited to about *three* years because the immediate post-census period is taken up with analysis and publication of the census data.

SESSION VI

The Relationship between Population and Development

17

Population and Development Planning

*O. O. Arowolo**

Introduction

UNTIL recently, development planning strategies in most developing countries were guided by a purely economistic definition of development. Planners tended to rely, almost exclusively, on the use of conventional economic indicators–savings and investment propensities, national income, productivity and balance of payments–in designing development projects and setting up desired targets, leaving the population at the mercy of incidental effects of economic modelling.

It is now becoming increasingly clear that economic progress measured in terms of growth of one or a combination of the conventional economic indicators cannot be equated with development of the society. If development is seen therefore from the point of view of the people rather than economic statistics, the starting point as well as the ultimate aim of any development strategy should be the *population.* Pertinent questions in this regard are the following:

- How large is the population?
- At what rate has the population been increasing?
- What are the characteristics of the population in terms of age, sex rural/urban residence, education, manpower mix, labour force etc.
- What is the nature of population distribution and redistribution mehcanisms?
- Given implied growth rate, are the current levels of fertility and mortality desirable?

From the point of view of population planning, the above questions are basic to any development plan formulation. But in order to provide answers to them there is need for a set of population data, derived from population censuses and vital registration records. In the absence of a reliable record of vital statistics, answers to these questions can be obtained from a set of provenly reliable population census data.

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* *Dr O. O. Arowolo lecturers in the Department of Sociology University of Ibadan, Ibadan.*

Since development programmes are expected to benefit the people, in the end any development plan performance should be judged in terms of the extent to which the ordinary person or the average person has derived any gains from the various social and economic programmes. Evaluation of development plan performance should be concerned in answering the following social welfare questions:

- Is the population (size) now gravitating towards the optimum position?
- By how much, has the average life expectancy increased?
- Is the population now maturely adjusted to the distribution of resources?
- Are urban places becoming dynamic rather than parasitic?
- To what extent has the economy been able to cope with increases in human numbers over the period in terms of education, manpower development, and the sort?

These are the pertinent questions to be asked about the people at the end of a plan period in place of the cenventional exercise in statistical calculation which may show growth of the economy with or without any meaningful impact on the well-being of the population.

Given the crucial position of population in development planning, therefore, it is obviously significant that the facts of the population should be ascertained with a minimum degree of inaccuracy. This explains why the need to generate reliable population census data should be given overriding considerations by any country that places premium on development planning as an instrument of social and economic transformation.

In the sections that follow, an attempt is made to provide answers, within the context of Nigeria's development, to the first set of questions already posed in the opening paragraphs of this introductory section. Answer to these questions will serve to educate us, especially those who carry the unenvitable burden of planning for the social and economic development of this country.

Population Size:

Accurate data on the size of the population for which planning is being designed is needed. How large is the population? The significance of the question is that the relationship between the size of a country's population and the resources available to that country are crucial in planning development strategies.

In discussing population size and development, reference should be made to the *Optimum Population Principle.* It is a theoretical notion about the right size of population given material resources and a set of technological conditions. If the size of a population is definable as *optimum,* then the welfare of every individual in that society is purported to be guaranteed. Under such conditions, labour supply is adequate, man-hour productivity is maximized, labour input is adequately compensated, all resources are fully utilized, and unemployment is minimal.

If the size of a population is too small for the full utilization of resources, such a society is said to be *underpopulated.* Underpopulation is manifested by underutilization of resources, leading to conditions of poverty in the face of vast and rich resources. Overexploitation of the limited labour supply, existence of unfilled vacancies in different sectors of the production process and structural unemployment also point to underpopulation.

On the other hand, in an *overpopulated* society, the existing population size, given current technological conditions, is too large for adequate utilization of resources. In such a society, mass unemployment, low wages, and over exploitation of natural resources characterize the economy. In addition, homelessness, urban overcrowding and slums are prominent social features. In an overpopulated society, the emergence and rapid growth of cities create a condition of overurbanization in which rural poverty and urban misery exist side by side, rendering the cities parasitic in their relations with the rural population.

Space does not permit a full appraisal of the optimum population theory here, but suffice it to say that it is the undeclared intention of any government to ensure that her population gravitates towards the optimum position through planning. To do so, however, the crucial question is: what is the size of the population? For Nigeria, there is no way of answering the question of population size with a high level of confidence. This is because the country cannot boast of any reliable population census report upon which such calculations are based. And to be sure if the question of popula- size is to be asked about Nigeria in the future, there is no other known source of information that is better than a national population census.

It is on record that Nigeria has made numerous futile attempts to estimate her population through 'partial' censuses (1871–1931) and national censuses (1952–1973). The results, all of which still remaining controversial are presented in Table 1.

The 1952/53 census is popularly regarded as the first national population census of Nigeria, but that exercise underestimated the country's population. On the other hand, the 1963 population census exaggerated the country's population to a degree not yet determined.

Two models of population projection are presented here; Model I is based on the assumption that the 1952/53 estimate of 30 million was correct, and

For planning, an interval estimate of the population of Nigeria by 1980 would be between 70 and 80 million. A midpoint value of 75 million by 1980 seems quite plausible, but should be regarded as tilting to the high side.

Table 1 Population of Nigeria (1911–1963)

Census Year	Population	Annual Growth Rate (%)
1911	15,971,730	–
1921	18,070,608	1.2
1931	19,130,859	0.6
1952/53	29,630,483	2.1
1963	55,592,000	5.9

Model II is predicated on the assumption that the 1952/53 correct figure was 35 million. Since we have no real basis for estimating growth rates of population between 1953 and 1963 (given the implausibility of 5.9 percent per annum generated by the census figures, 1952/53 and 1963, and lack of vital censuses (1952–1973). The results, all of which still remain controvers-population. The results are shown in table 2.

Table 2

	Model I (a)			Model II (b)		
Year	Low (c)	Medium (d)	High (e)	Low (c)	Medium (d)	High (e)
1955	31,836	32,307	32,782	37,142	37,691	38,246
1960	35,149	36,554	38,003	41,007	42,644	44,337
1963	37,300	39,365	41,527	43,517	45,923	48,448
1965	38,807	41,358	44,056	45,275	48,248	51,298
1970	42,846	46,792	51,073	49,986	54,587	59,584
1975	47,306	52,941	59,206	55,189	61,761	69,074
1980	52,227	59,899	68,635	60,933	69,877	80,074
1985	57,665	67,770	79,566	67,275	79,059	92,828

Note: Figures are in thousands.
(a) Based on population of 30 million in 1952
(b) Based on an assumed population of 35 million in 1952.
(c) *Low* growth rate: 2.0% per annum.
(d) *Medium* growth rate: 2.5% per annum.
(e) *High* growth rate: 3.0% per annum.

One potential source of problem is how to reconcile these figures with those regarded as official. For instance, at a meeting of the Supreme Military Council on May 17, 1977, the controversial 1963 population census figures were officially accepted and later imprinted in the constitution. Certainly it will demand more than professional argument to change those figures and the projections deriving from them. The military government also assigned offical population figures to each of the nineteen states of the Federal Republic of Nigeria. The official figures and their projections up to 1980 are shown in Table 3. Obviously, the planner has a crucial decision to make in this regard: to choose between scientifically estimated population figures and those deriving from the official position. The essence of planning is to assemble all the facts and apply them in anticipation of future development goals. Therefore, the option is clear.

Growth Rate

There is no growth rate of population that is inherently undesirable. Much depends on the existing relationship between population growth and other resources, as well as the institutional arrangements for allocation of resources.

The Growth rate of the population should be seen in conjunction with productivity of capital, and capital output ratio (that is the ratio of capital invested to resultant increase of output). It is argued for example, that with a capital output ratio of 4:1, the investment of 5 percent of the Net National Income (NNI) would produce enough to sustain a population increase of about 1.25 per cent at the existing income level. If a higher rate of population growth applies, and if higher standards of living are expected, then a far higher rate of investment is necessary (Mountjoy, p. 86).

It should also be noted that the growth rate is also relevant to population structure. Persistently high rates of population growth will generate a 'youthful' population, characterized by a preponderance of young children under 15 years of age. This implies a high burden of dependency and requires the diversion of funds for capital projects to areas of social infrastructural facilities.

The growth rate of the population should also be related to future population size for planning. At 3.0 percent per annum, a population would double its numbers in about 23 years. Any growth rate of population should be related to the rate of productivity in the different sections of the national economy.

One example of the relationship between population growth and development is in the area of educational planning. Rapid rate of population growth implies, of course, a correspondingly high growth rate of the school age (5–14 years) population. According to the results of the 1963 population, the school-age population in Nigeria amounted to 14.4 million, or 26 per cent of the total population. In a country with a low overall enrolment ratio a high rate of population growth is bound to set a severe limit on any programme of universal education. Not only does the economy have to cope with the problem of accomodating the backlog of unenrolled school age children, the increases in their population requires attention. Even if the money is there, it takes time and may be a long time, to plan for the educa-

Table 3 Projected Population (a) of Nigeria by State (1963–1980)

State	1963(b)	1976	1980
Anambra	3,596,618	4,957,978	5,472,679
Bauchi	2,432,296	3,351,568	3,700,131
Bendel	2,460,962	3,392,463	3,745,279
Benue	2,427,017	3,345,670	3,693,619
Bornu	2,997,498	4,132,084	4,561,821
Cross River	3,478,131	4,794,642	5,293,285
Gongola	2,605,263	3,591,384	3,964,888
Imo	3,672,654	5,062,794	5,589,325
Kaduna	4,098,306	5,649,560	6,237,114
Kano	5,774,840	7,960,681	8,788,592
Kwara	1,714,485	2,363,437	2,609,234
Lagos	1,443,568	1,989,974	2,196,931
Niger	1,194,508	1,646,642	1,817,893
Ogun	1,550,996	2,138,065	2,360,423
Ondo	2,729,690	3,762,908	4,154,250
Oyo	5,208,884	7,180,504	7,927,276
Plateau	2,026,657	2,793,769	3,084,321
Rivers	1,719,925	2,370,936	2,617,513
Sokoto	4,538,787	6,256,768	6,907,472
Total Nigeria	55,670,085	76,741,827	84,722,046

(a) Based on an annual growth of 2.5 per cent.
(b) Figures announced after a meeting of the SMGS on 17, May 1977.

tional needs (school places, equipment, teachers, etc) of the population.

Age and Sex Structure

There is hardly any suitable data on the age and sex structure of the population of Nigeria from any census before 1963. The difficulty of ascertaining the age of persons in a predominantly illiterate society like Nigeria is profound, no doubt; but there is hardly any justification other than reasons of convenience for the unconventional age categories reported in the 1952/53 population census of Nigeria. Ages were determined by using certain biosocial characteristics and the enumerator was the only judge. The published census results returned the following age categories: Under 2, 2-6, 7-14, 15-49, 50 +. Such a classification has practically little or no value for planning and demographic evaluation.

Although the aggregate figure of 55.6 million returned for Nigeria in 1963 is questionable, the age and sex structure derived from the census remains the only useful reference to the country on this subject. But the errors of age-misreporting are confounding and make the age/sex structure rather absurd. Distortions in the age structure are evident in ages 15-19, 20-24, 45-49, 50-54, 65-69, 70-74, 75-79 and 80-84. Each pair of adjacent age groups viz 15-19 and 20-24 etc. shows survival probabilities that are greater than unity. Neither the conditions of mortality nor net international migration in Nigeria could have accounted for such distortations. The data presented also shows the sex ratio by age, that is the number of males per 100 females in each age group. The erratic patten of fluctuations in sex ratio also points to gross age mistatement.

The practical question for planners is what to do in such a circumstance as this in which the age/sex structure of the population is considered pertinent to planning but available estimates from the census or other sources are unacceptable. Fortunately model estimates of population structure are available in the Regional Life Tables and Stable Populations (Coale and Demeny, 1966). According to Coale and Demeny, a unique stable population can be located in the universe of stable age distributions associated with any one of the four families or model life tables. To do this, however, requires knowledge of two nonredundant parameters, such as birth rate and (expectation of life at birth), the rate of increase and, the proportion under 20 and rate of increase, or the average age and the death rate. Unfortunately, none of these parameters is readily available for Nigeria; they too have to be estimated.

In order to locate an appropriate model age distribution for Nigeria from the stable population models, it is necessary to make some reasonable assumptions. First, it can be assumed that the population of Nigeria is quasi-stable, given the persistently high level of fertility and moderately declining mortality rates. In line with previous arguments, a growth rate of about 2.5 per cent per annum is also a reasonable assumption. Finally, we can assume, based on available evidence, that expectation of life at birth in Nigeria is 45 years.

A model age distribution that conforms to the assumptions made is a West female table, defined by mortality level 11. (e:=45.0) and by a growth rate of .025. The proportion in each age group of the model population is reproduced along with the actual age distribution reported from the 1963 census in Table 4. The model age structure should still be applicable to the population of Nigeria till about 1985, and beyond.

Population Distribution and Density

To a large extent, the patterns of population distribution and density point to the location of economic opportunities or resources needed for survival. Arrangement of population within the physical space is therefore crucial to development planning. For, if population is poorly adjusted to the distribution of resources, it will be difficult to achieve a balanced development of the natural resources. Excessively high densities of population in the countryside will tend to generate diminishing returns in agricultural production as a result of overfarming, fragmentation of holdings, reduced fallow period, and general ecological deterioration. Overconcentration of the

Table 4 Model Age Distribution for Nigeria

Age	*Model Age Distribution* %	*Actual Age Distribution, 1963* %
0-4	17.00	17.2
5.9	13.93	15.2
10-14	12.02	10.7
15-19	10.36	9.4
20-24	8.86	12.4
25-29	7.54	10.0
30-34	6.38	7.8
35-39	5.36	4.5
40-44	4.49	4.3
45-49	3.73	2.1
50-54	3.06	2.2
55-59	2.44	0.8
60-64	1.87	1.4
65-69	1.34	0.5
70-74	0.88	0.6
75-79	0.49	0.2
80+	0.26	0.7
Total	100.00	100.0

Source: A.J. Coale, and P., Demeny *Regional Model Life Tables and Stable Populations,* Princeton University Press, 1966; Federal Republic of Nigeria, Population Census of Nigeria, 1963, Vol. III, p. 7.

population in the urban environment relative to resources will also lead to congestion, unemployment, high residential density, high rents, development of slums and attendant social ills. Understanding the distribution and density of the population is, therefore, of paramount importance to development planning.

Writing in 1955, Buchanan and Pugh described the state of population distribution in Nigeria as follows:

> It is, . . . , a population whose distribution pattern is immature; the close adjustments of densities to environmental conditions, which is typical of long-settled areas, is here lacking, and settlement is incomplete over much of the Territory. (P. 58).

Two other pertinent features of population distribution and density in Nigeria were identified by the authors using an officially estimated population of 23,130,000 for the country during 1948–9. The first is that great areas are almost devoid of population, while elsewhere rural densities approach those of the Monsoon Lands or Egypt. Second, it was observed that the settlement forms in Nigeria show a diversity rare in tropical Africa. The village represents the characteristic form of settlement and in parts of central and southern Nigeria this is replaced by a more or less completely dispersed pattern of settlement, while the population of the southwest shows a degree of urbanization rare in Black Africa.

Although the 1963 census returned a total population that is much larger than the 1948–9 estimate, the pattern of distribution and density remains much the same. One obvious implication is that areas that were already highly concentrated by 1948–9 became even more dense in 1963, aggravated by high natural increase and net migration. Table 5 shows the density distribution for the four regions making up Nigeria in the 1950s. The density distribution of Nigeria's population based on the 1983 census, is shown in Table 6. It is clear from the tables that the pattern of density distribution has not changed.

Within northern group of provinces where densities are lowest, two provinces, Kano and Katsina with 347 and 269 persons per square mile, respectively, show signs of excessive population concentration. The most poorly populated provinces are Niger (49), Ilorin (63), Borgu, (64), Sardauna (65) and parts of Adamawa (76). Overall density of population in the Northern Region was only 106 persons per square mile in 1963. The Mid-Western Region appears to be moderately populated (170) with no signs of overconcentration in the two provinces (Benin and Delta) making up the region. But the Western and Eastern Regions were highly densely settled by 1963. The problem, however, was more acute in the latter than in the former.

Owerri Province with 848 persons per square mile in 1963 had the highest density for any province in Nigeria and for any comparable area unit in tropical Africa. This is closely followed by Ibadan province (736), Onitsha (604), Colony (575) and Calabar (484).

The Federal Territory of Lagos is, of course, a special case of high urban population agglomeration. By 1963, close to 25,000 persons were concentrated in one square mile of land area. No planning effort can afford to ignore the distasteful consequences of the excessive and increasing densities of metropolitan population of Lagos and the unparalled rural densities of Owerri, Onitsha and Calabar provinces.

Migration

There are two sides to the study of migration, namely, internal and international. One involves a more-or-less permanent change of residence from one civil division to another within a country, while the other involves a change of country of residence. For most countries it is easier to obtain information on international migrants than on internal migration.

With respect to the population of Nigeria, data on international migrants

Table 5 Density of the Population of Nigeria, 1948–9

Region	Estimated Population	Persons per sq. mile
Northern Region	13,500,000	50
Western Region	4,000,000	90
Eastern Region	5,200,000	110
Colony	430,000	310
Total Nigeria	23,130,000	60

Source: K M. Buchanan and J C. Pugh *Land and People of Nigeria, University of London Press, 1955, p. 58.*

are poorly kept, if accessible. Estimates of internal population movement can be derived from population census records if the census inquiry asked questions on place of birth, place of usual residence, place of current residence and duration of stay at place of usual/current residence. Failure to ask these types of questions in the past censuses in Nigeria, makes it difficult to estimate migratory movements within the country. Indirect estimates of migration can also be done if, in addition to basic data on the population, vital statistics are available for the country. As yet, Nigeria does not operate a vital registration system. All these short comings point to a critical area of data needed for population planning.

Internal Migration

In the absence of the conventional migration statistics, an attempt is made here to provide indirect indicators of the volume and pattern of internal migration in Nigeria, as well as the characteristics of migrants.

Two major migrants streams are characteristic of migratory movements in Nigeria; namely, rural-rural migration and rural-to-urban movements. Perhaps the more dominant has been the rural-rural migration. In the colonial period most movements of population originated in the rural areas and ended up in some other rural locations. Such migrations were in search of farmlands and agricultural labour. In the 1950s the rural-urban component of migration steams in Nigeria increased, but in terms of volume, it was considerably smaller than movements to rural areas. After independence, waves of migration into the urban areas accelerated but the perceptible rural-to-urban drift of the population today is only a fraction of the gross movements of population in the country.

At the level of regional analysis, the following patterns are discernible:

(1) A south-to-north movement of population dating from the 1950s with major desinations in the provinces of Adamawa, Bornu, Ilorin, Kabba, Niger, Plateau and Zaria. Most of the north-bound movements in the 1950s ended up in the new rapidly growing towns like

Maiduguri, Yola, Zaria and Jos. At the same time Lagos and Port-Harcour attracted migrants from virtually all parts of Nigeria.

(2) A north-to-south stream of migrants ending up in Lagos, Western and Mid-Western regions of Nigeria. Quite substantial proportions of

Table 6 Population Density Figures (1963 Census)

REGION OR PROVINCE	POPULATION	AREA IN SQ. MILE	PERSON PER SQ. MILE
NORTHERN REGION	*29,808,658*	*281,782*	*106*
Adamawa Province	1,585,290	20,885	76
Bauchi Province	2,476,329	20,120	95
Benue Province	2,641,959	27,657	96
Borgu Province	2,853,554	44,819	64
Ilorin „	1,119,222	17,719	63
Kabba „	1,280,144	10,953	117
Kano „	5,774,840	16,630	347
Katsina ,	2,545,006	9,466	269
Niger „	1,398,525	28,666	49
Plateau ,	1,367,448	11,272	121
Sardauna ,	878,271	13,476	65
Sokoto „	4,334,770	36,477	119
Zaria „	1,553,300	17,642	88
EASTERN REGION	*12,394,464*	*29,484*	*420*
Calabar Province	3,023,787	6,245	484
Ogoja „	1,602,533	7,485	214
Onitsha „	2,943,483	4,877	604
Owerri „	3,280,348	3,869	848
Rivers „	1,544,313	7,008	220
WESTERN REGION	*10,265,848*	*30,454*	*337*
Abeokuta Province	974,886	4,266	229
Colony „	778,322	1,354	575
Ibadan „	3,326,647	4,521	736
Ijebu „	576,080	2,456	235
Ondo „	2,727,676	8,162	334
Oyo „	1,882,237	9,695	194
MID—WESTERN REGION	*2,535,839*	*14,922*	*170*
Benin Province	1,354,986	8,482	160
Delta „	1,180,853	6,440	183
FEDERAL TERRITORY OF LAGOS	665,246	27	24,639
FEDERATION OF NIGERIA	55,670,055	356,669	156

* Includes Kaduna Capital Territory

Source: Federal Republic of Nigeria, *Population Census of Nigeria, 1963*, Vol. III, p. 57.

the south-bound movements ended up in the cocoa and rubber growing areas of Western and Mid Western regions.
and from the Urhobo and Isoko divisions of the Mid-Western region.

(3) East–to–West movements of population from the high density agricultural provinces of the Eastern region and from the Urhobo and Isoko divisions of the Mid-Western region. Apart from rural farm locations, most of these migrants ended up in Lagos, Ibadan and Benin City.

(4) A West–to–East movement of Ibo and Ibibio people in search of farmland and job opportunities in Port-Harcounrt and Calabar.

These four patterns identified are elaborately discussed by Udo who is a pioneer and known authority on the subject of migration in Nigeria.

The persistence of ethnic migration is borne out by the 1963 census. The population census exercise identifies 303 ethnic groups throughout the Federation. Table 7 shows the extent of ethnic mixture in each of the regions of the federation in 1963.

Table 7 Ethnic Groups by Region

Region	Number of Ethnic Groups	
	Originally Present	Enumerated in 1963
Northern Region	287	303
Western Region	1	143
Eastern Region	12	135
Mid-Western Region	7	64
Lagos	Unknown	99

Source: Federal Office of Statistics, Population Census of Nigeria, 1963, Vol. V, General Report Lagos, 1968. P. 115.

From table 7, it is obvious that the former Northern Region is the most ethnically mixed area of Nigeria. However, there is no area of the country that is ethnically homogeneous, implying of course, that there is no restriction of population movement in the country. It is in this regard that planning efforts should consider migration a phenomenon deserving close attention and a mechanism which if well oriented could be utilized in achieving a 'matured' adjustment of population to environmental conditions.

International Migration

Since no country maintains an open-door policy with respect to aliens, the net contribution of international migration to population change, is for most nations, insignificant. Most immigration policies are therefore geared toward ensuring entry of the most highly qualified worker in the country's area of critical need.

Little is known about Nigeria's international migration policies under colonial rule. The first and most coherent immigration policy statement was published under the 1963 Act and it set out the government's position on foreign entrepreneurs in Nigeria, permanent residence of foreigners, visitors and matters relating to their employment.

Current estimates of immigrants in Nigeria, and Nigerian citizens aborad are difficult to find. The latest figures are those of foreigners in Nigeria in the report of the 1963 census of population. Although clearly out-dated the data are shown in table 8 for non-African and African aliens in Nigeria. By then, aliens enumerated numbered less than 60,000, a rather low total given visible signs of immigration waves into Nigeria's oil-rich economy today.

Without any real statistical basis it is difficult to estimate and project the alien population in Nigeria. However, on the basis of known increased capacity of the national economy .

Table 8 Immigrant Population in Nigeria, 1963

Country of Origin	Total	Males	Females
All African Countries	31,059	21,808	9,251
Cameroun	15,223	11,629	3,594
Niger	7,333	5,227	2,106
Dahomey	2,879	1,706	1,173
Ghana	2,555	1,444	1,111
Togo	874	463	411
Chard	884	556	328
U.A. Republic	256	146	110
Sierra Leone	203	135	68
Liberia	153	85	68
Other	694	417	282
Non-African Countries	17,593	11,356	6,237
France	6,700	5,198	1,502
United Kingdom	3,136	1,875	1,261
United States	1,317	625	692
Scandinavian Countries	1,080	530	550
Netherlands	825	437	388
Eire	614	419	194
Pakistan	302	170	132
Canada	300	148	152
India	202	118	84
Italy	189	152	37
Germany	90	61	29
Lebanon	80	49	31
Greece	77	48	29
Other	2,681	1,526	1,155
Unspecified Countries:	8,747	4,102	4,645
All Immigrants	57,399	37,266	20,133

Source: Federal Republic of Nigeria, *Population Census of Nigeria, 1963*, Vol. III, pp. 14–15.

to absorb foreign experts (in construction companies, government corporations, schools, colleges, universities, petroleum prospecting, industrial management, etc) it is possible that not less than three million aliens are being accomodated in Nigeria today. Recent economic co-operative movements among West African countries, such as ECOWAS, also have the potential to draw other West African nationals into Nigeria in large numbers now and in the future. Certainly more reliable estimate could be made if official (secrete) immigration documents were available for study.

It is equally difficult to estimate the magnitude of Nigerian citizens abroad. Their numbers, which must be large judged by different reports, comprise persons on diplomatic missions, temporary residents on different kinds of work-permit, business representatives and students holding non-immigrant visas of varying degrees of duration. Precisely how large the Nigerian population aborad may be is difficult to estimate given the total lack of data. More will be said on this latter in the text with regards to planning and policy.

Urbanization

The growth of individual cities and the proliferation of city centres jointly define urbanization as a demographic process. Such a process is a potent mechanism for social transformation but, urbanization itself is one of the most valuable indicators of social and economic development.

Nigeria is essentially a country of rural dwellers. Based on a statistical definition of at least 20,000 inhabitants for an urban place, according to the 1963 population census, about 84 per cent of the total national population was rural. The census enumrated 46,698, 591 people in rural areas (locations with less than 20,000 inhabitants) out of a total population of 55,670,055. A regional breakdown of the rural and urban population is provided in table 9. In table 10, the total rural population of each region is related to the number of rural places, or villages, identified in 1963.

Although village population was larger on the average in the Northern Region, it was the most rural region in the country in 1963 and is obviously so today. The Western Region was the most urbanized of the four regions with over half of its inhabitants enumerated in urban places. Both the Eastern region and Mid-Western region appeared to be at the same low level of urbanization in 1963. Although current data are not available, it is likely that the Mid-Western region (now Bendel) has become more urbanized than the former Eastern region of Nigeria.

Overall studies in urbanization might have been low but in recent years the phenomenal growth of the major cities in Nigeria is public knowledge. The mulicipality of Lagos presents a good example for high rate of urban expansion in Nigeria, with growth rates of 3.2 per cent between 1931 and

1950, and 8.2 per cent between 1950 and 1963. Similar growth rates characterize the urban population of Ibadan, Benin City, Onitsha, Enugu, Port Harcourt, Zaria, Kano, Kaduna, Sokoto, Maiduguri. In recent years, with the creation of nineteen states from the original four regions and the Lagos territory and the creation of more local administrative units, more urban places of rapid population increases have been added to the list namely Abeokuta, Akure, Ogbomosho, Oshogbo, Ilorin, Minna, Yola, Makurdi, Owerri, Calabar, Bauchi, to name a few of the state and/or local government capitals.

Table 9 Urban and Rural Population in Nigeria, by Region (1963)

Region	Total Population	Urban	Rural	Percent Urban
Northern	29,808,658	3,186,614	26,622,044	10.7
Western	10,265,848	5,224,371	5,041,477	51.0
Eastern	12,394,464	1,385,074	11,009,390	11.0
Mid-Western	2,535,839	283,778	2,252,061	11.0
Lagos	665,246	665,246	—	100.0
All Regions	55,670,055	8,971,464	46,698,591	16.0

Source: Federal Republic of Nigeria, *Population Census of Nigeria, 1963,* Vol. 111.

Table 10 Rural Population and Enumerated Village, Nigeria (1963)

Region	Total rural population	Total Number	Average Size
Northern	26,622,044	6,708	3,969
Western	5,041,477	4,084	1,234
Eastern	11,009,390	7,288	1,510
Mid-Western	2,252,061	2,488	905
Lagos	—	—	—
All Regions	46,698,591	20,568	2,270

Source: Federal office of Statistics. *Population Census of Nigeria, 1963,* Vol. V, p. 118.

Growth rates of population in these cities exceeed the average national growth of population by a considerable margin. Although relevant data are lacking, it is possible that rapid growth of these centres of population agglomeration are to be attributed to net-migration. Policies of urbanization should recognize two forms of problems facing urban development in Nigeria. The first is the rapid annual rate of growth, of the order of 5 per cent or more. The second is the fact that most of these cities are not recent in origin and their older traditional sections require massive investments in order to elevate their residents to a level that is at least higher than rural and livable in a modern context. Both issues point to an ever-increasing need to expand urban facilities to cater for the rapid rate of population growth and progressive deterioration of the urban environment.

Interesting enough, and equally challenging, increasing urbanization is expected to accompany programmes of social and economic development. So a simple minded projection and one that is realistic is that urbanization will continue to increase. For any nation pursuing economic and social development programmes, the reverse is unimaginable. Therefore, increasing urbanization calls for planning so as not to generate parasitic urbanization with its diastrous consequences on the city and the country. Again only a national population census can generate needed data for measuring the degree and pattern of urbanization for development planning purposes.

Manpower

The manpower of any nation is her most valuable asset. Development planning should therefore strive toward achieving greater accumulation of this human capital and its effective investment. This is because manpower, by definition, is the totality of persons who could produce the goods and services if there were a demand for their labours and they desired to participate in such activity. That segment of the manpower which actually engages, or attempts to engage through application for work, in the production of goods and services is economically active and sometimes called the work force.

Major sources of data on the manpower situation include population census recrods and special surveys, the later to up-date information from a census at a time in the past. Over the years the occupational codes and the number of categories derived from numerous works done by the active population have changed from one census exercise to another. But the basic structure of the labour force in major occupations has changed very little.

Out of a total of about 18 million employed persons in 1963, 57.0 percent belonged to the agricultural sector which employed most of the workers. By 1975 the total number of persons in gainful occupations was estimated to be about 28 million, with 64.0 per cent in agriculture, followed by manufacturing and processing which employed 16.8 per cent, and distribution, 12.2 per cent. These proportions compare with previous figures based on the 1963. There is no doubt that there is need for accurate data on the manpower situation in a country for manpower planning and projection. Again, a national population census is the best source of such information.

Table 11 Sectoral Distribution of Employment (1975)

Sector	Estimated Total in Gainful Occupations	
	Percent	Number (in Thousands)
Agriculture	64.0	17,860
Mining and Quarrying	0.4	110
Manufacturing and processing	16.8	4,690
Construction and building	0.9	250
Electricity, gas, water	0.1	30
Distribution	12.2	3,400
Transport & communication	0.6	170
Services	5.0	1,400
Total	*100.0*	*27,910*

Source: Federal Republic of Nigeria, *Third National Development Plan, 1975–80,* Vol. 1 p. 368.

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18

The Role of Population Data in National Planning and Development

Chukwudum Uche

Definition

BY population data we refer to data dealing with the births, deaths, migration and aspects of population composition. Population composition includes information concerning the age, sex, ethnicity, marital status, educational qualifications, occupation and geographical distribution of the population. Two vital parameters derivable from the above definition are ciritical for national development; namely, growth rate of the population and the characteristics of the labour force.

Sources of demographic data.

Demographers traditionally depend on national census and registration of births, deaths and migration for their data. Census and vital registration are usually supplemented with sample surveys for detailed investigations of topics of special interest or importance.

What has been done and what is being done?

In Nigeria, a national system of compulsory vital registration is non existent. During the colonial times vital registration existed in a few towns, such as Lagos, Kano, Port Harcourt, Calabar, and in some local government areas. Registration of vital events continues now in a few urban places, such as Lagos and Katsina but these cannot substitute for a national system. Nor do they have full coverage; The U.N. *Demographic Yearbook,* (1973:260) has observed that the Lagos system has only 70 per cent coverage even as recent as 1969.

Census-taking of limited scope started in Lagos in 1866. By 1871 it became decennial, but was still confined to Lagos. The last of the series of partial enumeration and guesses was the 1931 'census'. In 1931, an enumeration was carried out in five townships and 201 villages for the Northern Provinces and in Lagos. For 96 per cent of the indigenous population of the

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* *Dr. Uche lectures in the Department of Sociology and Anthropology, University of Benin, City.*

Northern Provinces and for 98 .6 per cent of the indigenous population of the Southern Provinces, figures were mainly obtained from existing records, though greater effort was made in the Northern Provinces to up-date them (Kuczynski. 1948: 571).

The first census with national coverage was carried out in 1952/53. The 1952/53 census is now dated but it is relevant to note that it suffered many shortcomings: under enumeration, estimated variously at 15 per cent (Okonjo, 1968: 96), 10–15 per cent (Ekanem, 1972: 191) and 18 per cent (Olusanya, 1972: 224), and unusual age categories and distortions. The 1952/53 census 'can yield practically no information on vital trends" (Van de Walle, 1968: 30)

The 1962 census was cancelled because of the political heat it generated. The following year another census was held in an attempt to rectify the inflations reported in the 1962 figures. The 1963 census returned a figure of 55.7 million for the whole country. Olusanya (1969: 156) put the overcount at 16 per cent while Udo (1968: 102) has noted that though interstate inflation differed it was certainly universal. Other estimates that placed Nigeria's population under 50 million are Eke (1966) and Okonjo (1968). After a critical examination of the 1963 data, Ekanem lamented that the 1963 data "do have much scientific value in terms of increasing our knowledge of the components of population change in Nigeria" (Ekanem, 1972: 201). The 5.6 per cent 1953–63 intercensal growth rate revealed by the 1963 figures make them definitely suspect as this country did not experience any influx of international migrants. The inflation of the total population is not unrelated to the triangular political competition of the First Republic in which representation was tied to population figures.

Apart from inflation the age structure of the 1963 figures was badly distorted with 30 per cent of the population found in the 20–34 age brackets. This is due to movement to the 20–34 age group by those aged 15–19, as well as over enumeration of people who properly belonged to this age group (Olusanya, 1975: 251–58).

In addition to inflation and distorted age groups we also had the commonly noted digital preference for ages ending in 'O'and '5'

The 1973 census raised high hopes. Professional, demographers wished that it were free from the political influences and flaws of the 1963 count (Olusanya, 1966: 150; Okediji, 1974: 13). The result is now history. The total figures of 79.76 million was totally unexpected. United Nations demographers have estimated Nigeria's 1973 population to be 59.61 million (U.N. *Demographic Yearbook* 1973: 101). In a recent study, Olusanya, starting with a 1963 estimated population of 43.9 million (a figure close to the 1962 rejected count) and a constant fertility model which assumed a CBR of 54 per 100 and life expectancies of 40–50 years for females and 36.9–46.7 years for males between 1963 and 2008, obtained a 1973 total figure of

59.445 million for Nigeria (Olusanya and Pursell, 1975: 134–135). The annual rate of growth by state over the decade 1963–73 revealed by the count ranged from 0.62 to 6.80 per cent with a national annual rate of 3.60 percent. It was welcome news to professional men when the 1973 exercise was cancelled. Less welcome, though understandable, is the reversion to the 1963 figures with all their faults previously discussed.

When national census figures are unavailable or defective one usually looks around for national sample surveys for the estimation of vital rates. In Nigeria, the only available demographic survey of national import was the 1965/66 Rural Demographic Sample Survey conducted by the Federal Office of Statistics. The survey was planned 'to provide data for estimating the birth, death and natural increase rates for the Nigerian population and the rate of migration from rural to urban areas'. The second part of the survey meant for the urban areas was never carried out.

The Rural Demographic Sample Survey found that more people moved out of the sample villages during the survey than into them. The authors inferred that the predominant direction was rural to urban migration. They totally neglected the fact that rural-urban migration is important in Nigeria (Udo, 1975). The national rural net out-migration rate then was 13.3 per thousand with the outmigration from rural areas in the south being thrice that of the northern villages. This national rate was considered (by the writers of the report) as too high. It appeared that out-migrants were better recorded than in-migrants, while migration itself is not necessarily constant across a given time span. We certainly do not know by what factor to deflate the national rate to arrive at a 'normal' statistic, reflecting the true rate in a climate devoid of convulsive political anarchy and rural banditry.

The overwhelming proportion of rural out-migration are males. Their age composition reveals that they are mainly young people (15–34) and children (0–14). The inference is that the motivational determinants are economic and educational, though no questions were asked on the reasons for moving out of the villages.

For fertility and mortality, as well as migration, whatever else that exists is localised. The fertility aspect has been summarized by McWilliam and Uche (1976) and the mortality studies by Uche (1975). The migration field is also littered by studies of the same kind, for example, Ejiogu's study (1968) of Lagos migrant areas, Ife/Oshogbo studies by Adepoju (1974), Olusanya's study (1969) of rural areas of Oyo and Ogun states and the study of Lagos Ibadan, Kano and Benin plus some rural areas (Osayimwese 1975). The same observation can be made of *Ekanem and Adepoju's* study of Warri Calabar and Ilorin (Ekanem and Adepoju, 1976). Probably the only surveys that partially escape the parochial accusation are the surveys of migrant tenant farmers in southern Nigeria in 1966 (Udo, 1975) and the seasonal migration from the north to the south (Prothero, 1959).

As one surveys the demographic surface at the beginning of the 1980's in Nigeria, one notices that the spurt of activities which started in the 1960's continued in the 1970's. Sadly, however, no reliable national parameter on the population is available. Nonetheless, the boundaries of fertility and mortality are being increasingly approximated. But the government continues its development planning on the basis of a rate of growth which is out-dated, probably incorrect at the time of its derivation, and very certainly an underestimate today. The migration aspect of demography is the most underdeveloped of the triad, as far as the availability of indices is concerned. We do, however, know or at least can approximate the characteristics of migrants, the determinants and direction of migration in this country.

What should be done

We shall discuss this section under two headings:

1. Types of data to be collected
2. Methods to be used in their collection

Types of data to be collected

In the 1952/53 count everyone was asked to provide information on age, sex, occupation, literacy and ethnic origin. The 1963 census inquired about age, sex, ethnic membership, religion and occupational status. This compares reasonably well with the 1970 U.S. census which asked all persons questions about residence, name, relationship to head of household, sex, race, age, month and year of birth, marital status. However, whereas the U. S. Bureau of the Census goes ahead to obtain much more detailed information on residence, educational attainment fertility, employment, occupation and income from 5, 15, 20 percent sample, Nigerian census office has nothing based on a sample of the 1963 population census. The 1965–66 Rural Demographic Survey which could be considered as supplementary to the 1963 effort had questions on age, sex, marital status, fertility, mortality and migration. Neither the 1963 census nor the 1965/66 survey had information on predictor variables, such as education, which are useful in cross-tabulation aimed at explanation the phenomena of fertility, mortality and migration. For a national count, the addition of questions on education, employment and marital status seems adequate. However, where this is done, there is the need to go into greater depth with a sample of the population. It is here that much change is needed.

The Economic Commission for Africa (1974: 60–61) has recommended for national demographic sample surveys the following questions grouped into three levels of priority. The *minimum* list of questions includes:

(1) Questions to be asked of all persons:

- Name

- Relationship to head of household
- Sex
- Survival of parents

(2) Questions to be askéd of every adult woman:
- Number of children even born alive who are now living at home, by sex
- Number of children ever born alive who are now living elsewhere, by sex
- Number of children ever born alive who have died, by sex
- Date and sex of her most recent live birth
- Whether or not this last live-born child is still alive.

(3) Questions to be asked of each household:
- Births in the last 12 months, by sex and date of birth
- Deaths in the last 12 months, by sex, age and date.

The minimum list is suggested on the assumption that the survey aims at a determination of the age-sex distribution and its vital rates and that area cluster samples, that is, a complete enumeration of the population within the selected area units, will be used.

The second priority variables are marital status and birthplace or place of origin. The third level of priority include question on education, economic situation and housing.

In Nigeria, migration questions should be expanded to include questions on place of residence years ago and home place (or town). It is also relevant in our context to include questions on attitudes to work under economic characteristics.

Methods of data collections

The ECA *Manual* recommended an area-sampling frame with area units having 200–400 persons. Area units are to be selected by systematic sampling from a list arranged geographically. No area unit should be more than 1000 in population. In each area unit a complete enumeration is to be carried out. No sampling of dwellings or households within area units is allowed. They refer to this type of sampling as area cluster sampling. The 1965/66 Rural Demographic Sample Survey differs from the ECA recommendation in two important ways. The sample design was stratified according to agricultural characteristics and the units were planned to have between 1500–3000 inhabitants. Acutally, 'the population of some sample units turned out to be less than 1500, and of some units more than 3000. The average size of a sample unit at the beginning of the survey was 1766 persons' (F. O. S. 1968:1).

We have devoted considerable space in the preceding pages to summarizing the current state of demographic science in Nigeria, the problems encountered and the suggestions to improve existing data. We feel that our approach in this paper is proper because a great understanding of the softness of available data is bound to lead us to be more cautious in accepting them or decision based on them

It is with all these in mind that we now wish to consider the interaction between population parameters and socio-economic variables.

Population Change and Socio-economic Development

It seems fairly agreed and obvious that population and development interact in complex ways. Population variables influence development variables and the latter influences population. It is therefore no longer debatable that population factors should be taken into account in economic and social development planning. This is so because population growth rates that are out of tune with economic growth rates pose greater problems for the attainment of plan objectives. We therefore move to the consideration of how this imbalance might affect different sectors of the economy and society.

Population and agricultural development

It is well-known that increasing population on a given piece of land invariably leads to higher densities, land fragmentation and low productivity per unit of land. In such a situation substantial population growth adversely affects not only agricultural but over all economic development. Hance (1970: 417.20) has developed eleven indicators of population pressure which include soil deterioration, degradation, or outright destruction; use of excessively steep slopes and other marginal lands; declining crop yields; changing emphasis, especially to soil tolerant crops such as manioc; reduction in the fallow period and lengthening of the cropping period without measures to retian soil fertility; breakdown of the indigenous farming system; food shortages, hunger and malnutrition; land fragmentation, disputes over land, landlessness; rural indebtedness; unemployment and underemployment in rural and/or urban areas and certain types of outmigration. Using these criteria Hance reported that by mid-1967, 47.1 percent of the area and 50.5 percent of its population were under population pressure. For sub-Saharan Africa the figures were 37.2 per cent of the area and 40.2 percent of the population. Hance (1971, p. 20) reported that for Nigeria the comparable figure were 15 percent of the area and 47 percent of the population, while in the former Eastern Region (encompassing the Anambra, Imo, Rivers and Cross River States) 31 percent of the area and 66 percent of the population were under pressure at an average density of 925 per square mile.

In situations portrayed by the Eastern States increase of agricultural production by bringing forests, wasteland and fallow land into cultivation and shortening the fallow period and intensive cultivation will only have a partial success. Application of innovations such as fertilizers and insecticides might contribute to improved yield. But the introduction of irrigation and mechanical farming is certainly difficult because of the small holdings cultivated by each farmer, and the inelasticity of the land tenure system. Even in places where land is plentiful the new technologies are capital–rather than labour intensive. What all these add up to is that significant improvements in the levels of living of the rural population have not occurred and will be difficult to bring about. Of related importance is the fact that difficulty in attaining self-sufficient in basic foods is associated with hunger and malnutrition which are daily becoming stark realities. And if there is any doubt about decreasing agricultural production one has only to examine the cost and volume of food import in Nigeria and other developing countries in the last few years (Uche, 1980). Alternatively, one might take a look at the consumer price indices of most developing countries to see the spiralling cost of basic food items. In Lagos, Nigeria with November 1974 as baseline, the all-items consumer price index for the first quarter of 1976 was 166.7 that is, the price of basic necessities increased by nearly 70 percent in fifteen months. The index for food rose to 180.9 during the period. (West Africa, No. 3084 August 9, 1976, p. 1157). More recently, the Composite Consumer Price Index (combined rural and urban centres) averaged 240.0 (1975=100) during the first half of 1981. The items responsible for the inflation were food, tobacco, kola-nuts, clothing and other services *(Business Times,* 1982).

Savings and Investment

The Coale-Hoover population model (Coale and Hoover, 1958) which was developed for the condition of an underdeveloped country illustrates the magnitude of gains in income per head that would result from a reduction of fertility. Pursell (Olusanya and Pursell, 1975: 202) has demonstrated that with a 50 percent reduction in fertility in Nigeria between 1963 and 2008, an increase of 66 percent in income would result by 2008.

It has been noted that the result obtained from the Coale-Hoover model compounds two types of gains–those arising from the reduced dependency ratio, and those from the increasing capital-labour ratio. The first factor, the reduced dependency ratio, is due to the fact that the number of children grows more slowly vis-a-vis the productive age groups and this accounts for the bulk of the calculated gains in the first decade or so.

The other assumptions in the model are more arguable. The savings ratio need not be reduced by high fertility especially since the poor, possessing the *majority* of the children, do not save much and those who save viz, the affluent sector of society business and government do so independent of fertility consideration. And the perspective available savings determine the

the level of investment and the rate of economic growth is simple-minded.

The above observation not withstanding, it follows that high rates of population growth have a negative effect on the availability of capital and land, factors which though not critical for development, are yet important for achieving significant increases in output and living standards.

Population and Employment

A rapidly increasing population implies on increasing labour force including new job seekers. An increasing labour force demands investment to provide the additional workers with the necessary materials. And these investments might be impossible because of the requirements a rapidly growing population need to keep it as its present level of living.

The absence of an appropriate technology relevant to the needs and realities of developing countries aggravates this problem. Without a radical technology increasing unemployment is bound to be the lot of the developing countries.

Related to the problem of unemployment is serious imbalances in the supply and demand of labour. Specific skill shortages exist together with maladjustments and misallocations. It is not unusual to encounter a highly placed official performing functions meant for lower cadres, if only to derive the inputs he needs for his own job performance. Nor is it surprising to find a functionary high in the hierarchy, who really cannot adequately perform the tasks of his office.

Population, urbanization and migration

The pace or urbanization is even more rapid in the developing countries, than in the advanced countries at comparable periods in their history. In those developing countries the urban population in 1970 was 2.5 times as large as in 1950. With half of this growth attributable to migration, the economic and social consequences of such moves are considerable. Whereas in the developed countries urbanization was mainly a response to industrialization, however in the developing countries, migration to urban areas has been mainly the result of rapid population growth. Other contributory factors are urban-rural wage differentials, attractive urban life, employment opportunities, and the need to escape from traditional taboos, sanctions and obligations.

Rapid urbanization has led, in some areas, to overurbanization manifested by a deteriorating urban environment, for example, slums, inadequate housing, water supply, sewerage, communication and transport, uncontrolled land use, excessive densities and deficient educational and recreational facilities. The proliferation of petty traders, hawkers and other sectors of the service sector with small capital outlays, and the excessive growth of the bureaucracies without visible indicators of increased productivity and efficiency, demonstrate substantial underemployment just as long lines at the few labour exchanges, increasing activities of robbers, touts and thugs, prostitutes and pimps illustrate open unemployment and underemployment. What greater evidence can one point to than the recent experience in Bendel State where 70,000 candidates competed for 4000 places in the universal primary education training scheme of the state *(Daily Times,* 20 August, 1976:40). And yet, Bendel State is one of the most well-off states in the federation.

It therefore follows without much disputation that if population growth does not slow down, if ecologically relevant technologies are not introduced, and if the economy does not radically move ahead, unemployment, underemployment and exploding urban agglomerations due mainly to migration will continue to be the lot of developing countries.

Population and educational development

Education is an integral component and a precondition for development. A certain level of education is a basic requirement for the development of the individual and society. Education also contributes to the formation of attitudes and motivations that are required for social and economic progress. Because education is a condition for and component of development it affects population trend and is affected by the latter.

The rapid rate of population growth in the developing countries in recent decades has contributed immensely to the pressures on existing educational facilities. With the increasing trend towards universal education at the primary and secondary levels, enrolment rates are many times higher than the growth rates of the required educational infrastructures. In these circumstances either a break-neck development effort or a decline in fertility would be required to attain enrolment targets at the specified periods.

Equally important is the point that increasing numbers of students impede qualitative changes in pupil teacher ratios, teacher qualification, buildings, equipment, etc. Resources which would have gone into improving these are diverted to maintain present standards for the influx of students into the school system. Because of this diversion of resources to service existing standards, programmes designed to correct existing inequities and imbalance suffer. Such programmes should deal with inequalitities between boys and girls, rural and urban areas, the rich and the poor families and social classes.

And finally, where the state is not bearing the full cost of education, large families, which are in most cases poor ones, are less able than others to bear the cost of their children's education. Of related importance is also the point that the convergence of poverty, large family size and shorter birth intervals retards the children's cognitive, verbal, motivational, health and physical development.

Population and health

Population trends may aggravate health problems. Population growth by producing pressures on the essentials of life, for example, food, and by contributing to the crowded environment may lead to a deteriorating health condition. A rapidly growing population with 45 percent of its members under 15 years of age makes a different type of demand on the health services than if its age structure were different. Rural-urban migration contributes to straining an already over-tasked health system in the towns.

Also, high fertility affects the health of the offspring. The risks of stillbirth, infant and child mortality jump after the fourth birth. Shorter birth intervals affect both the mother and child. Shorter birth intervals as a result of large family size contribute to malnutrition and respiratory infections, and retarded physical and intellectual development commonly observed in children in such environments. We recognize that other variables might be at work here, but the effect of parity and spacing on children's health and growth is significant.

To conclude, it should be noted that our sketchy effort is just an attempt to illustrate the complex ways in which population and socio-economic variables interact and influence one another. No one is saying that population growth is the main cause of the problems of development or that attention to the problems of rapid population growth should lead to a neglect of the urgent task of developing the economy and society. Population policies cannot alone solve development problems. What we have said is that population policies, integrated with development planning, can make a lasting contribution to the betterment of man. This betterment is bound to take place with the creation of employment opportunities by means of appropriate technologies and provision of health facilities emphasizing preventive rather curative care and utilizing paramedical personnel on a large scale. As part of the repertoire, are policies designed to tackle inequities based on sex, region, creed or class. Special consideration should be given to the education and employment of women outside the home. These policies should be backed up by programmes to reduce fertility. This is because a continuation of the high growth rate would militate against the attainment of each of the lofty goals of economic and social development planning.

Research

The programme for action recognizes the indispensability of demographic statistics to the derivation of the indicators of the state of the economy and the needs of society. With economic and other social data, demographic statistics provide the basis for the formulation, implementation and evaluation of development policies and programmes. The meeting at Lusaka (E.C.A., 1975: 16), therefore, urges that research should be directed to the following areas of primary concern to African countries: patterns, trends and differentials in morbility, fertility, population distribution and migration; attitudes to family size, family planning and factors affecting its operation and success, the interrelationship between population variables and socio-economic development, population policies and factors influencing their formulation and implementation, also the use and effectiveness of traditional medicines, the problems of infertility and subfertility in some countries of the region, the division of rural labour and the time budget by sex, the impact of rural change on economic and social tasks and responsibilities of women, and the effects of women's education and employment on fertility rates.

Institutional Innovation and Strategies for Data Collection

The population policy enunciated in the *Third National Development Plan* (pp. 293–94) and the *Guidelines for the Fourth Plan* (pp. 85–86) are essentially the same. However, the demographic data collection system now is on a stronger footing. During the Third Plan, the Census Office moved from the Minsitry of Economic Development to the Cabinet Office with the new name of National Population Bureau. With the 1979 Constitution the National Population Bureau became the technical arm of a new National Population Commission. The powers of the Commission are as follows (Part I, 3rd Schedule, 1979 Constitution):

(a) to undertake periodical enumeration of population through sample surveys, censuses or otherwise;

(b) to establish and maintain a machinery for continuous and universal registration of births and deaths throughout the Federation;

(c) to advise the President on Population Problems;

(d) to publish and provide information and data on population for the purpose of facilitating economic and development planning ; and

(e) to appoint and train or arrange for the appointment and training of enumerators or other staff of the Commission.

The Chairman and members of the Commission are appointed by the President and confirmed by the Senate. They hold office for five years and could be appointed to a second term of the same duration.

Once in office the Commisioners have enough independence to do their work. Section 145 of the 1979 Constitution guarantess them enough autonomy:

(a) in appointing, training, arranging for the trianing of enumerators or other staff of the Commission to assist it in the conduct of any population census ;

(b) in deciding whether or not to accept or revise the return of any officer of the said Commission concerning the population census in any area or part of the Federation;

(c) in carrying out the operation of conducting the census; and

(d) in compiling its report of a national census for publication.

Any reduction in this independence is the requirement of Section 193 of the 1979 Constitution, that the report of the National Population Census must be submitted to the President. The President, on the basis of the advice of the Council of State, may accept or reject. If the President rejects the report because it is inaccurate or perverse, then all the commissioners will automatically lose their jobs in accordance with secion 144(3) of the 1979 Constitution. Otherwise, removal of any of the commisioners requires a two-thirds majority vote by the Senate.

Having received the above powers and security of tenure, the only limitations to the work of the commissioners are in their imagination. Therefore, for the remaining part of this essay, we shall suggest some points which the Commission might consider to fulfill its onerous task of providing timely, valid and reliable data for socio-economic planning.

Manpower development

The Commission should pursue the training of demographers and supporting staff very vigorously. This should be carried out at predegree, undergraduate and postgraduate levels. In this direction, the Commission should work out meaningful relationships with universities and research institutes in Nigeria. The resources for training in Nigeria are adequate for pre-degree and undergraduate studies. The training facilities at the postgraduate levels are only sufficient in few subbranches of demography and actuarial science. A possible strategy could be to organize a Training Division of the Commission to handle pre-degree and other sub-professional training including the training of enumerators. One or two Nigerian universities should be assisted to set up a *department of population* science to handle training at the Bachelor's degree level. For the time being, postgraduate training could be handled both in Nigerian and abroad. *It is therefore encouraging to note that* in the 1981/82 Federal Government postgraduate awards, 47 candidates won scholarships for masters and Doctorate degrees in Actuarial Science and Demography *(Daily Times,* 6 January, 1982:17,19).

Relationship with universities and research institutes

The relationship that one expects to see existing between the Commission and the universities should not end in staff development. The Commission should utilise demographers in the universities, research institutes and insurance companies as consultants on short or part-time basis. This will help to reduce costs and help to assemble a competent corps of professionals to handle specialised tasks. They should be encouraged to participate in ongoing research or to submit proposals on projects mutually agreed upon as deserving investigation. In this regard, university-based demographers should be encouraged to spend part of their sabbatical year at the Commission.

Funding of research

To make its mark in the demographic scene, the Commission needs to be well-funded by the federal government. If the Commission is economically, buoyant it can then be in a position to fund demographic research in this country. As I argued elsewhere (Uche, 1977: 47), one of the most valuable contributions the Commission can make is 'to convince the government to pay for demographic research just as it is willing to pay for research conducted by the Nigerian Council for Science and Technology, Nigerian Institute for Strategic and Policy Studies . . . To free demographic investigations from the stronghold of foreign interest, the Federal Government must step in and bear the main cost of such researches. The foreign control of research funds has meant an over-concentration on family planning studies to the detriment of studies concerned with the collection of basis data needed for planning.

National Demographic Data Bank

As I had urged elsewhere, (Uche, 1977: 49), there is an urgent need to establish a National Demographic Data Bank. Given the public funding of demographic research that is being advocated the establishment of a Data Bank becomes simple. All researches funded partly or fully from public funds will be required to deposit facsimiles of questionnaires, codebooks, tapes, published papers, etc with the bank. After a grace period, any Nigerian scholar with a legitimate research interest could get access to the data for secondary analysis.

Staff Deployment:

Because of the shortage of professional staff in the Bureau, the current practice which aims at establishing state branches of the National Population Bureau is ill-advised. A few zonal branches serving groups of states will be more effective on the ground than ill-equipped state branches.

Conclusion

This essay has presented a critical analysis of the available population data in Nigeria. It has also made suggestions about the type of data needed for socio-economic planning which must be collected if our planning exercise is to improve considerably. The paper also examines the interactions among demographic parameters and socio-economic variables and the priorities for African countries in these areas as seen at the Lusaka consultations. The paper ends by making recommendations about manpower development, staff deployment, funding of research, relationships between the Commission and the universities and the establishment of a demographic data bank. If the Commission can pull our demographic resources together we shall be able to witness the beginning of a more scientifically conducted national population count. This census should be more comprehensive in obtaining information on many more demographic and explanatory variables. More detailed exploration of particular areas should be pursued through a national sample survey as is being correctly done for the fertility survey.

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19

Census Data Required For Planning

O. Akinkoye

IN NIGERIA, emphasis on the political and financial advantages of the census returns have in the past led politicians and national leaders away from the more important uses of census data for planning. Politicians and national leaders have largely viewed the census returns in terms of the implications for constituency delineation and revenue allocation. As a result, the census has assumed a substantial political dimension in Nigeria. This development is unfortunate because it has overshadowed the more important uses of census data for planning.

In this paper, an attempt is made to examine the relationships between census information and planning. Pertinent socio-economic and demographic variables are discussed and their relevance for planning purposes are emphasized.*

It is a fact that the major concern of leaders in developing nations today is to raise their countries from the underdeveloped status and improve the level of well-being of the citizens. Essentially, the governments in the developing nations such as Nigeria wish to solve or minimize problems associated with (a) delivery of basic services e.g. education, health and food, (b) housing and environment, (c) migration and urbanisation, (d) transportation and communication, and (e) political stability. However, it is exceedingly difficult to plan successfully for the goals enumerated above without good data. In order to improve the well being of citizens, there is need to know the number, composition and distribution of the population. The implication of this, of course, is that careful thought must be given in advance (i.e. at the design stage of the census) to incorporate into the questionnaire design, those variables and questions that will aid effective planning for the citizens. It is costly in both human and non-human resources to collect good census information. Therefore, all efforts must be made to ensure that the design of the questionnaire is based on the data needs of socio-economic planners.

Experience has shown that the questions asked in past census exercises for example the 1973 census exercise are indeed scanty. In the 1973 census exercise for example, the following were the items in the questionnaire:-

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* *Dr. Akinkoye lectures in the Department of Sociology, University of Ibadan*

1. Full name of respondent
2. Relationship of respondent to the head of household
3. Sex of the respondent (i.e. male/female)
4. Age of the respondent (i.e. age last birthday)
5. Marital status of the respondent (i.e. never married, married, seperated, divorced, widowed)
6. Religious belief of respondent (i.e. Moslem, Christian, traditional, none, other)
7. Ethnic origin/nationality of respondent
8. Home place of respondent
9. Birth place of respondent
10. Languages spoken by respondent
11. Level of education of respondent
12. Attendance at Koranic school
13. Employment
14. Occupation
15. Place of work.

From the above, it is clear that the designers of the questionnaire were more interested in the *Total Count* of the population. This could have been due to the fact that the military government had a narrow view of the uses of the census data. They were at that time preoccupied with plans for the eventual return to civil rule, and census data in their opinion must be used to divide the nation into constituencies. They were also keen on the total count for the purpose of allocating revenue on population basis. Hence, the designers neglected very important variables.

There was no question on *Income.* Users of census data will agree that the income variables is indeed a crucial one. It is a major variable used in cross tabulations. Income distribution within a nation is a good indicator of various levels of poverty. Very poor areas for example local government, census tract, enumeration areas, etc; are easily identifiable in census returns and the attention of government may be focused on such needy zones.

Other very vital questions excluded are as follows:

- Age at first marriage
- Number of children ever born alive
- Number of children living
- Length of stay (i.e. years/months already spent) at place of enumeration
- Residence of respondent 5 years earlier
- Number of times married
- Presence and duration of disability

In the following section, a tabular presentation of some of the pertinent variables in the questionnaire are identified and some of their uses for planning purposes are discussed in order to emphasize the non-political/financial values of the census data.

Tabular Presentation of Some Census Materials and Their Uses in Planning

Item Number	Item Description	Questions Asked	Uses of Data Summary
1.	Sex	What is your sex (male/Female)	A good indicatior of (i) sex composition of the total population and the various states. (ii) Useful for cross-tabulations for distribution of occupations by sex, distribution of income by sex, distribution of literacy and level of education by sex etc.
2.	Age	What was your age on your last birthday.	(A) Good for understanding (i) the structure of the population (ii) problems of ageing in various communities (iii) composition of different areas. (B) The age variable is very essential for planning the Strategies for military service. (C) Health delivery services is highly dependent on the age variable because adequate provisions for paedriatic, infant, adult and old age health services depend to some extent on the information on age. (D) Educational planning including budgeting and teacher requirements depend on the age structure because children who are aged 01 in 1982 will be ready to register for Primary education in 1987 when they are aged 06. (E) Housing demand is also partly determined by age because citizens demand housing units at the onset of adulthood (i.e. around age 19) and keeps increasing there-after.
3.	Ethnic Composition	What is your ethnic origin.	A good indicator of ethnic composition of a nation and the various areas in the nation. It is a good information for planning towards political stability It is useful for state creation and division of state into local governments.
4.	Literacy	Which languages do you speak?	This variable is very useful especially to those who plan radio and television programmes. The languages spoken by the cross section of the population within the broadcasting area is an important input in programme planning.

5.	Education	What is the highest level of education attained by you?	(A) Gives a clear view of the status quo e.g. the proportion of the population that have never had formal education. The proportion of illiterates is an accepted indicator of a nation's level of social development. (B) Provides a picture of the imbalances within the country. (C) Useful for identifying areas requiring urgent attention.
6.	Number of children Ever born.	How many children have you ever born ?	This is useful in measuring fertility levels. Areas which have returns which indicate a departure from the norm could be identified for further studies to determine infertility problems and/or family planning needs.
7.	Number of Children living	How many of your children are living	Useful for mortality studies. Also an indicator of health condition.
8.	Occupation	What kind of work do you do?	This is an important indicator of the level of development because the proportion of persons engaged in agricultural activities dimminishes as the economy develops. Also useful in determining unemployment level.
9.	Residence 5 years ago	Where were you living 5 years ago?	Migration rates, patterns and trends of migration, problems of population pressure and depopulation are studied by an examination of the returns on this question.
10.	Presence and duration of disability	Do you have any kind of physical or mental disability?	The total number of the disabled, type and nature of disability, and distribution of disabled persons. The ministry of socil development and welfare could then base their strategies and programmes for helping the disabled upon the data obtained.

Data on the Population Totals and distribution

The total population of the nation as well as the distribution of the population have very important non-political/financial values. For examples, the water engineer can hardly design water services for the population if he does not have good information on the population of the area because he had to base his computations on per-capita litre consumption in the defined area. Also, the energy specialist requires good population data to plan for the production and distribution of energy because energy plans are usually based on per-capita consumption (in KW). In addition, the transportation specialist will have to make his plans for moving human populations efficiently. He requires good census data to design transportation needs. Protection of citizens must also be based on the total size and distribution of the population. For example, if we assume that there must be a policeman for every 200 citizens, then an area with a population of 200,000 should have about 1000 policemen. National food requirements is a function of the size and growth rate of the population, as well. The economist computes the per-capita G.N.P. using population figures. To the economist, the population constitute both producers and consumers. Those manufacturing children goods need information on the number, age composition and distribution of children.

Growth Rates

We have shown with some examples that census data contain valuable resources for planning purposes. It is also the usual practice to use the data to examine the changes that have occurred over time and compute growth rates. For planning purposes, the rate of growth of the population is infact a more important variable than the absolute size of the population because a major concern of planning is the *future.* Economists usually measure the performance of the economy with reference to population growth rates. However, it is virtually impossible to compute growth rates of a nation's population without valid baseline data. A nation must *FIRST* have a good *census count* before changes and growth rates are computed at later dates. Nigeria needs a baseline year upon which future comparisons and computations will be based. Nigeria now relies on the 1963 census data for planning purposes because the 1973 exercise was a failure. By 1983, the 1963 data would be 20 years old and it would be very out-dated and obsolete for effective planning. Therefore, special efforts must be made to achieve a very high degree of accuracy and reliability in Nigeria's next census exercise.

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20

Population Census Problems in Nigeria

F. A. Amungo

Introduction

NIGERIA is a country faced with various problems; one of the most complex of these is the: POPULATION PROBLEM.

Population problems include census problems, since past census records in the country have been so unacceptable and controversial that, people who know the meaning of census get frightened whever census-taking in Nigeria is mentioned. The word "census" is associated with all sorts of fraudulent practices that any time a census is conducted, the results are subjected to suspicion and criticism which have led to the cancellation of the figures of some censuses in the past. Such situations have created serious population problems in the country. The result is that the planner, the policy maker and the researcher are left with no reliable data to carry out their duties effectively; so the country lacks the basis for proper development planning.

This paper hopes to expose some of the population problems, their causes and give suggestions for solving them. It also examines some of the steps taken by the federal government to solve population problems, some of the implications posed by the continued existence of such problems in the country.

Population and Development in Nigeria

The principal aim of social, economic and cultural development is to improve levels of living and enrich the quality of life of the people thus, it is imperative to link population programmes with development plans in Nigeria.

Most governments have realized that population and development are inextricably bound together and that no population programme should be considered in isolation from policies and plans on health, housing, education, employment the environment and the use of resources. Equally, there is increasing recognition of the fact that development programmes should reflect population policies.

In order to improve the quality of life for the ever increasing number of people in Nigeria – all of them individuals needing food, shelter, clean water, jobs, education and medical care, as well as a decent environment to

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** Mr F. A. Amungo is Honourable Commissioner, National Population Commission for Rivers State, Port-Harcourt.*

live in – the Nigerian planners, researchers and policy makers should have reliable data about the people concerned. How many of them and what are their various characteristics?

For the reduction of mortality, particularly of infants, we need to have accurate knowledge of present trends in the population.

At the moment, Nigeria needs an effective population policy, but this cannot be done without reliable data on the current population variables such as the:

- age and sex composition;
- the size and the growth rate;
- mortality, fertility and migration factors that affect the population as a whole;
- the impact of population dynamics on the socio-economic variables in the country; and
- the effective distribution of population to attain maximum benefits for the country.

These factors and problems make it imperative for Nigeria to have accurate censuses conducted periodically and to maintain an effective vital registration system all over the country. Several efforts made in the past have failed; so, Nigeria lacks reliable demographic and socio-economic data for proper planning.

The main problem in Nigeria is how to get reliable demographic information such as age and sex composition, fertility, mortality, morbility, migration, and population change. These are crucial factors for any meaningful development planning in the country and are examined briefly below.

Age and sex composition

Age and sex composition are the most basic characteristics of a population. The number or proportion of males and females in each age group can have considerable impact on its demographic and socio-economic behaviour.

Nigeria, has a young and expansive population where about 44 percent of the population is less than 15 years of age. Obviously, population structure determines the labour force, the number in school, as well as different medical needs, consumer preferences, and even crime patterns; so population composition has a great deal to do with how that population lives.

Where more detailed data are lacking, the age-dependency ratio is often used as an indicator of the economic burden on the productive portion of the population, though some persons defined as productive are in practice, dependent persons.

Countries with very high fertility usually have the highest age-dependency ratios because of the large proportion of children in their populations.

Fertility

Fertility refers to the reproductive performance of females, males or couples in a population. The production of live births in a population is related to the number of marriages, the age at marriage (or cohabitation) the availability or use of contraceptives and abortion, economic development, the educational and occupational status of women, and the age-sex structure. This is why the nation needs accurate information on variables for meaningful planning and policy formulation.

Mortality

Mortality refers to deaths as a component of population change. Eventually death occurs to every population member, but the rate at which it occurs depends on many factors, such as age, sex, race, occupation, and social class and its incidence can reveal much about a population's standard of living and health care.

The causes of death vary greatly from population to population and from period to period, and are influenced by many factors, including health and environment conditions. The infant mortality rate is considered a good indicator of the health status of any given area.

In Nigeria we need accurate data to calculate: death rate, age-specific death rate, cause-specific death rates, infant mortality rates, maternal mortality rate, life expectancy at birth, etc. and recent mortality trends. The future course of mortality should be a topic of great interest to Nigerian planners and researchers on population and development, but no accurate data exist to carry out such assignments.

Morbidity

Morbidity refers to disease and illness in a population. The outbreak of a disease can have a serious effect on other aspects of the population; so, data about the frequency and distribution of a disease can aid in controlling its spread and in some cases lead to an identification of its causes. Without accurate data, the various rates for effective planning, such as incidence rate, prevalence rate, case fatality rate, cannot be calculated.

Migration

Migration is the movement of population; more exactly, the movement of people across a specific boundary for the purpose of residing. Migration is a component of population change and the rates cannot be calculated without population correct data; we cannot plan about these people and the effect of the migrants on the population without adequate information about such migrants and the migration rates.

Population change

Population change has three components: births, deaths and migration. Without accurate data, we cannot estimate properly the population size and its growth rate, but these are the basis for development planning in a nation.

Census History in Nigeria

Censuses were conducted in 1866, 1868, and in 1871; after 1871, decennial censuses were taken until 1973, (by-passing 1941).

Before 1911, the census covered only Lagos and small parts of the mainland areas. Those of 1911, 1921 and 1931 were extended to cover the whole country, but were made up of rough estimate and guesses (Okonjo, 1968: 78).

The results of the 1962 and 1973 censuses were not processed because of serious errors in the figures while that of 1963 had its results accepted and published though the figures caused much controversy and criticism.

Some of the problems that were encountered during the past censuses need to be mentioned here:

Topological features

Some parts of the country have many creeks and some other areas have irregular valleys and mountains. It has been difficult to cover all these areas during the specified census periods. Furthermore, certain roads are unmotorable during the rainy seasons, and many of the bridges on the rivers connecting different sections of the country are out of use.

Transport and communication

During censuses or surveys, there had been problems in transporting people and materials to the various parts of the country; also there had been difficulties in communicating the aims of government policy or reasons for conducting the census or survey to the masses. Broadcasting, newspapers and other media were useful mostly to the few literates who formed a small fraction of the national population. Illiteracy was a source of misreporting errors.

Religion

The *purdah* custom, regarding the seclusion of muslim women, presents difficulties in censuses and surveys. In the 1962 census, enumerators were not allowed to enter purdah quarters in Moslem communities, and so counting by sight was impossible. In the re-count in 1963, an exchange of enumerators among the regions was agreed upon. A team of enumerators went to the North from Eastern Nigeria; since men were not allowed to see woman in purdah those steps proved ineffective (Udo, 1968:102). This lack of counting by sight could cause both coverage and content errors; also, politicians in non-muslim area could use this as a reason to suspect inflation of the figures in the Muslim communities, and the criticisms could lead to complications.

Political influence

In Nigeria, it has become difficult to know when census figures are accurate, as politicians have created controversy over census figures which they felt were unfavourable to them. Such action will continue to cause doubts in people's minds about the Nigerian census results and may even lead to the cancellation of future censuses that have accurate figures.

It is appropriate to summarize this with the statement by Yusufu:

> The degree of political importance placed upon a census in any country depends a great deal upon its political maturity, the degree of social integration between the various people of the country and the state of the political parties and the balance of power between them. (Yesufu, 1968: 106).

Nigerians are very conscious of the fact, that political power, revenue allocation formula, allocation of social amenities to the various communities, etc., are mainly based on population figures; so the tendency is to politicize or inflate population figures during censuses.

A population census taken during a period of political tension is most likely to be affected by the resulting confusion. This was the case during the 1931 population census in Nigeria.

Originally, an all-inclusive census was planned for the whole country, but the scheme had to be modified by the governor in April, 1930 to exclude the southern provinces of the country. This step was taken because there were disturbances in Owerri, Onitsha and Calabar Provinces of Eastern Nigeria at the time.

Arrangements were therefore not easy to complete in those areas. The women feared that the enumeration was an attempt to tax them, and also to increase the taxes of men. So there was resistance and disturbance. (Prothero 1968:89).

At the same period (1931 census), women in Eket and Degema Divisions of Eastern Nigeria protested against the census, because of educational rates imposed on them by the district council. Census taking during election periods is also not advisable.

Finance

Ogunlesi noted that the cost of the 1963 Nigerian Census was 'about as much as it costs to provide medical and health services for the whole of Western Nigeria for one year' (Hance, 1970:5).

The costs of the past recent censuses in Nigeria are as follows:

(a) 1952/53 census (conducted separately in the three Regions:-

(i) Northern Region = £39,000 (₦79,000)
(ii) Eastern Region = £44,000 (₦88,000)

(iii) Western Region = £31,000 (₦62.000)
Total Cost = £1.5 million (₦3.0 million)

(b) 1962 Census = £1.5 million (₦3.0 million)
(c) 1963 Census = £2.5 million (₦5.0 million)
(d) 1973 Census = ₦37.0 million.

The 1962 and 1973 censuses were cancelled which caused a big loss of money and waste of time for the country as a whole.

One of the main reasons why there was no re-count in the 1973 census was due to lack of funds and it is clear that the decision to conduct a census cannot be taken light because of the high costs.

It is necessary to look at the censuses conducted in (a) 1952, (b) 1962, (c) 1963 and (d) 1973 in greater detail.

1952 National Census

For the 1952 population census, preparations started in 1950 in order to obtain figures that refer to a specific point in time and also to avoid double counting or omissions. The government statistician who was then redesignated census superintendent, later on, found it impracticable to have a simultaneous count in all the three regions. Nonetheless, the accuracy of the results were affected by the big size of the country as revealed by the following:

> Certain parts of Borno Emirate, which is more than three-quarters of the size of Western Region, were extremely difficult to access. In these areas, travelling teams were used, as it was not possible to provide separate enumerators for every village (Okonjo, 1968: 80).

In the 1952 census, according to Duru (1968:72), the divisions of Brass, Degema, Ogoni, Opobo and Eket were the main areas where the deltaic and coastal creeks of Eastern Nigeria imposed a great handicap to the successful completion of the census counts. The southern portions of Ahoada, excluding the metropolitan area of Port-Harcourt and South-Eastern portions of Calabar Province, also entailed difficulties. In some places, it took two weeks to reach settlement sites within enumeration areas. Other small settlements such as fishing hamlets were completely omitted. Even though, the count in most of the Rivers Province was taken in April, it was already difficult to travel from one place to another (Duru, 1968: 72).

The implications of poor communication on census and surveys was summarized by Duru on the 1952/53 Nigerian census:

> The error in the North was probably one of deficit rather than excess. Despite the fact that 13,000 officers were used for the enumeration, the task of completing the count within the time limit was considerable. Some offices, like those in Bauchi and Yola, were poorly staffed, overworked, and faced with inadequate means of transportation to cover considerable distances, all of which made counting very slow. Gross

> errors in the numbers and deficiencies in the answers obtained almost certainly resulted (Duru, 1968:73).

The 1952/53 census also neglected to include questions on place of birth. The only data from the census which could be used to indicate anything on migration were sex ratios, and the accuracy of these might well have been affected in some areas, for example, in the Muslim parts of the country women were not permitted to be counted by sight, and so coverage and content errors might have occured. (Mantras, Judah, 1975:255).

Detailed ethnic enumeration was also largely ignored. For example, in the Northern Region, only three ethnic groups, Hausa, Fulani and Ibo were enumerated. The selection of ethnic groups for enumeration was left to the discretion of the authorities in the individual provinces. This caused lack of uniformity and a measure of confusion. Only very few and fragmentary data was available on the major groups while no separate information was distinguished for the other ethnic groups in the country. It was therefore difficult to calculate emigration rates and inter-ethnic movements and their effects.

The basic data related to volume, pattern and timing of migration which were needed in the country for the measurement of the effects of migration on disease transmission and eradication, and for other aspects of socio-economic planning were not available.

The United Nations found the 1952/53 census to be a weak basis for estimating fertility; the data on age-structure appeared to be biased as no acceptable reasons could be found for the peculiarities in sex-age distribution (U.N., 1956: 32–33).

1962 National Population Census

The role played by politicians in census activities led to the cancellation of the 1962 population census figures.

When the 1962 provisional census figures were announced, and the northern politicians heard that the population of southern Nigeria was slightly higher than that of the north, a supplementary count was made in the north which resulted in the addition of nine million more people to their figures (Ekanem 1972: 44). It was then rumoured that a village with a population of twenty thousand persons was 'discovered' in the Eastern Region of Nigeria.

The Eastern Region was immediately accused of trying to dominate the federation by presenting false population figures and simultaneously, there were reports of gross inaccuracies in the recording of figures in the north (Yates 1971: 107). There were attacks and counter attacks publicly by politicians from both the northern and southern regions in the news media until the 1962 census figures were eventually cancelled by the federal government.

1963 National Population Census

In the re-count in 1963 after the cancellation of the 1962 figures, the Prime Minister personally took direct control of the census exercise. A United Nations expert was engaged as an adviser and arrangements were made for inter-regional exchange of enumerators. All regional premiers agreed to cooperate.

When the census figures were released, they were more unacceptable to some regions than were the cancelled 1962 figures. The Premier of Eastern Region, Dr. M.I. Okpara, described the figures as 'worse than Useless' (Udo, 1968:98). He used his position as premier of Eastern Nigeria and leader of the National Council of Nigerian Citizens (NCNC), and rejected the 1963 census result on behalf of his government and party.

The northern Peoples Congress (NPC) accused the Premier of Eastern Nigeria by suggesting that the published figures had thwarted his ambition to become the Prime Minister of the whole country, and this was the cause of his rejection of the figures.

The government of the Eastern Region then filed a suit against the Prime Minister on the controversial census figures. The action led to the confirmation of the legal authority of the Prime Minister whose decision on the census matter was final. However, while the figures for the 1963 census were officially accepted, this has not removed doubts from people's minds as to the accuracy of the figures (Yesufu, 1968: 108).

Table 1 shows that the population of Nigeria increased by 83.1 percent and had an annual growth rate of 6.0 percent during the period July 1952 to November 1963. The corresponding figures for the five regions are also shown in table 1.

Table 1: Percentage Increase and Annual Intercensal Growth Rates by Regions in Nigeria

Regions	Population (000)		Intercensal percentage increase	Annual percentage growth
	July, 1952	Nov. 1963		
Northern	16,835	29,809	77.1	5.7
Eastern	7,215	12 394	71.8	5.2
Western	4,954	10,266	123.4	7.4
Mid-Western	1,491	2,536	70.1	5.3
Lagos (Territory)	267	665	149.1	9.1
Nigeria	30 402	55,670	83.1	6.0

Source: I.I. Ekanem, *The 1963 Nigerian Census, A Critical Appraisal.* Benin-City: Ethiope Publishing Corporation, 1972, Table 4.1, p. 72.

According to Som (1968), the rate of population growth in African Countries during the period 1960–1963 was estimated at 2.5 percent per annum (Som, 1968:97). Also, the findings from other bodies and United Nation's estimates show that population growth rates in Africa are less than 3.0 percent per annum. Therefore, a growth rate of 6 percent per annum, as was estimated with the two census 1952/53 and 1963 was too high, since, within this period, there was no marked indication of high immigration into the country (Ekanem, 1972:72).

1973 National Population Census

The 1973 Census Board, made up of twenty-seven members, was established by the 'National Census Decree, 1973' and was inaugurated on the 27th July, 1972.

The preparation for the census took fifteen months, and the census count covered the period from the 25th November to the 2nd December, 1973.

The chairman of the Census Board enumerated several problems that were encountered some of which were the following:

(i) One of the problems the Board had to contend with was to wean the people away from the concept of census as a tool for political exercise intended to collect facts.

(ii) A Committee of Experts was approved by the Head of State; they were mostly members of the Board and the Board's advisers. For some unknown reasons, however, two members of the Supreme Military Governor of the South Eastern State and His Excelency, Mr. Ukpabi Asika, Administrator of East Central State were injected into the Committee. His Excellency, General Gowon said they were merely to act as 'overseers'. At the meeting of the Experts which followed, Mr. Asika usurped the post of the Chairman of the Committee, and every attempt made to dislodge him did not meet with the approval of His Excellency, the Head of State. When he later tried to make the business of the Committee a private affair between him and the Head of State, the Board threatened to resign, and it was not until then that he retreated; . . .

(iii) The Committee at an early stage of its work detected very heavy inflation in the figures–the majority of the members saw no useful purpose in the continuation of applying any more tests;

(iv) It was observed that the validation exercise carried out, using various tests exposed various fraudulent devices for the inflation of figures, the magnitude of which was unbelievable;

(v) It was clear that, gross inflation which did no credit to the nation took place in at least one-third of all the enumeration areas in this census;

(vi) No matter what efforts were made at the centre to put everything in order, the states had to play their own parts–it appears this has been polarised. In my opinion, a good head count in this country is hardly possible as long as the allocation of revenue and the representation in Parliament are tied to census figures;

(vii) A comprehensive report on the manual of sample enumeration area batches from all states by the editorial subcommittee brought out that 'attempts were made in the field to inflate figures by enumerating households which did not appear to exist and by adding persons to the existing households, who apparently did not exist. In most of such cases, the prescribed procedures were not followed;

(viii) The validation committee concluded that at least a period of three years is required for the planning and execution of a population census. Most of the past censuses in this country were planned and executed within two years. Lack of adequate preparatory period is one of the causes of this country's census fiasco;

(ix) Because of lack of adequate preparation, the census exercise suffered from lack of accommodation, material and manpower. This was an unwholesome situation for the prosecution of a population census. The attitude of the citizens of this country towards the exercise is another reason for its failure;

(x) The Chairman advised the Head of State that he should tell the Nation that Federal Government and the Board had been let down by some elements in different parts of the country who had played foul during the head count by inflating the census figures (Federal Government, 1975:vi–xxii).

Vital Registration

A vital registration system should provide adequate statistics to form the basis for national decisions. Unfortunately, the existing registration ordinance does not make provisions for a central or local agency which, among other things, could gather, analyse and disseminate basic vital statistics.

Although births and deaths are being registered in towns all over Nigeria, records of such registrations are not made available either to the National Population Commission (formerly National Population Bureau) or the Federal Office of Statistics, Lagos for analysis and publication (Umoh, 1972: 23–24).

Summary and Conclusion

The attempts to collect population data in Nigeria have always run into problems –political, topological, transport, communication, finance and administration. In this paper, we have explained in some detail, the part each factor has played in frustrating our efforts to collect reliable and accurate data. Some solutions have also been suggested. Two cases, the political aspects and the efforts made by government to solve the problems by setting up the National Population Commission need to be mentioned again.

Politicians and census publicity

It is advisable that politicians and village heads are not allowed to partake in census campaigns because their actions have led to the inflation and subsequent cancellation of census figures in the past.

The federal and state governments should endeavour to provide as much as possible, the basic amenities to all communities in order to reduce the tendency to inflate census figures in order to be allocated such amenities by size of population;

Census publicity should be confined to educating the people and soliciting for co-operation rather than giving political interpretations. Census is purely a statistical exercise and should be treated scientifically in order to promote the reliability of the results.

National Population Commission

The Constitution of the Federal Republic of Nigeria, 1979, has provided for the establishment of the National Population Commission in section 140 (g), page 48. Some other relevant provisions in the constitution are:-

(i) *Composition of the Commission:*
The National Population Commission shall comprise the following members, namely–
- (a) a chairman; and
- (b) one person from each state of the Federation. (Federal Government, 1979: 108).

(ii) *Powers of the Commission:*
The Commission shall have power
- (a) to undertake periodical enumeration of population through sample surveys, census or otherwise;
- (b) to establish and maintain a machinery for continous universal registration of births and deaths throughout the federation;
- (c) to advice the President on population problems;
- (d) to publish and provide information and data on population for the purpose of facilitating economic and development planning; and
- (e) to appoint and train or arrange for the appointment and training of enumerators or staff of the Commission'. (Federal Government, 1979: p. 108).

(iii) *Independence of the Commission:*

The National Population Commission shall not be subject to the direction or control of any other authority or person–

(a) in appointing, training or arranging for the training of enumerators or other staff of the commission to assist in the conduct of any population census;

(b) in deciding whether or not to accept or revise the return of any officer of the said commission concerning the population census in any area or part of the Federation;

(c) in carrying out the operation of conducting the census; and

(d) in compiling its report of a national census for publication' (Federal Government, 1979: 49–50).

Some other activities of the Commission include:

(i) The educating of the public about census and other population matters;

(ii) The continued up-dating of enumeration area maps, production of a gazetter of towns and villages, also the provision of permanent census and survey frames in the country; and

(iii) The continued compilation of historical events to help in obtaining accurate ages during surveys and census.

One can observe from the above submissions that the National Population Commission has been constitutionally authorized to look into all population problems in the country and seek for solutions on a continous basis. The main snag is that, the provision of funds for the smooth running of the autonomous establishment is remotely controlled by other super forces; so, if for one reason or the other sufficient funds are not made available to the commission at the proper time, the commission will not be able to implement its programmes effectively.

Some other suggestions

1. Sample inquiries assume a crucial role in providing data in areas with defective or non-existent registration systems and also in enabling indepth studies of socio-economic variables and their interrelationships. A survey also makes it possible to ensure quality checks and incorporate special adjustments for response biases. Such inquiries and analysis should be continuously carried out.

2. It is essential that enumerators should be selected on a non-tribal basis; they should be properly trained, well supervised and controlled during surveys and censuses.

3. During census, enough time and attention should be given for internal and other consistency checks and they should be properly applied before announcing the provisional results. This will minimize public criticisms that may lead to the cancellation of the census results as was the case in some

past censuses.

4. Normally, field enumeration and other forms of demographic data collection are carried out within the legal authority obtaining in the country. The administration of the National Population Commission should ensure that such laws exist and are carefully enforced for the continued collection, analysis and publication of accurate data on population in the country for effective planning and research work.

5. Demography as a subject should be taught in all our educational institutions. This will make educated persons to appreciate the importance of obtaining accurate and reliable population statistics for effective planning and research in the country.

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Discussion VI

The Relationship Between Population and Development

The group observed that population and economic development interact in certain definite and complex ways. It is possible to look at this relationship from two perspectives: namely, is it population which influences economic development or vice-versa? However, the group agreed that semantics are not necessarily important at this stage and that it would be preferable, for the purpose of the present assignment of the NPC, to regard population as the factor influencing economic and social developments.

To this end, it was pointed out that there is clear evidence that the population of this country is growing at a very high rate and that this phenomenon is potentially (if not presently) problematic. Therefore the group recommends to the Commission as follows:-

(a) to commission studies to ascertain the growth rate of the population and the various dimensions of the growth rate, and on the basis of these findings make appropriate recommendations to government for consideration in drawing up various socio-economic development programmes.

(b) Related to the above, special attention should be paid by this Commission to the study of infant, child and maternal mortality and their implications for health and population programmes.

Separate studies should also be undertaken by the Commission to determine in specific terms the exact nature of the relationship between population size and growth and the various sectors of social and economic development, e.g. health, education, energy, agriculture etc. The NPC should help in funding these studies or to undertake such studies on its own.

The NPC should recommend to government to de-emphasize population size in the distribution of social and infrastructural amenities.

The NPC should sponsor studies to ascertain the magnitude and direction of internal migration and the implications of migration for national development, national integration and the achievement of a more even population distribution in the country.

The NPC should sponsor studies which deal with relationships between specific demographic variables and socio-economic parameters.

Members of this group were aware that some studies have been done in some of these areas but most of these were not of national coverage. We recommend therefore that the Commission should synthesize existing research studies in the area of population and development.

SESSION VII

Evaluating Human Resources Through Census

21

Using Primary School Enrolment to Test Population Census Reliability

*P. Ada Omorogiuwa**

SINCE Nigeria attained independence in 1960, three population censuses had been conducted. Those of 1962 and 1972 were cancelled. The controversy over the 1963 census was such that the former government of the Eastern Region took the federal government to court. The acceptance of the 1963 was a mere political compromise which did not enjoy the public confidence. As rightly pointed out by Yesufu (1968).

> experience of Nigeria shows that in Federal States where regionalistic feelings are so strong, the political stakes of a census can be so high as to make the desirability of a statistically accurate count seem irrelevant.

The question of having an accurate head count in Nigeria has become a serious national problem. Although it is well-known that the 1963 census, with its weak data base did not reflect even in the 1960s the true demographic situation of Nigeria, we continue to use it even in the 1980s. The issues involved are so complex and sensitive that the census conducted in 1973 by the military with all its centralized command system had to be cancelled. One would have expected that under a military regime, political sensitivity would be submerged in the exercise.

So long as population continues to feature prominently as a factor in revenue allocation and constituency delimitation, the census issue may continue to be problemetical. The question one may ask is: What then should Nigeria do to solve this endemic problem of accurate head count which the military could not even tackle?

The aim of this paper is to highlight the use of primary school enrolment to test the reliability of the population census or even to estimate total population if other sources of data which can be politically manipulated fail. At the moment, the only internal demographic data source which is not biased in Nigeria, is the primary school enrolment of children aged 6–12. Primary school enrolment data are published regularly and easily accessible throughout the federation. Those are classified according to states and local government areas. In the states operating free and compulsory secondary education since 1979, reliable data are available for the age groups 6 through 15.

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* *Dr. P. A. Omorogiuwa lectures in the Department of Economics and Statistic. University of Benin, Benin City.*

The paper is divided into five sections. In section 2, the sources of population data are highlighted, Attention is focussed in section 3 on the use of primary school enrolment as an alternative data source. The experience of Bendel State in using the primary school enrolment to estimate the popula- of each local government area is discussed in section 4. Finally, section 5 contains the summary and conclusions.

2. Sources of Population data

Population data from censuses in Nigeria are unreliable. For instance, two contrasting results were declared for the 1962 census and the controversy generated was acrimonious. Consequently, the census was cancelled and the expenditure on it was lost. The 1973 census which was also cancelled recorded 79.76 million as Nigeria's population. The figures were said to have been inflated and arbitrarily compiled to favour certain sectional interests even under a corrective military regime.

Vital registration is another source of population data. Unfortunately, its operation has not been nation wide, though by 1980, the registration of births and deaths was made compulsory in Lagos. Since then, various efforts made through legislation and public enlightment campaigns have not yielded much dividend. The bold attempt in 1979 by the Federal Military Government which enacted a law (Decree No. 39 of 1979) to make the registration of births and deaths compulsory throughout the federation has not significantly changed the situation.

Another data source is the population register containing the particulars of individuals. Such particulars are useful for analysing the socio-economic characteristics of the population. Unfortunately, the population register does not exist in Nigeria. Even the proposal to establish a national identity card system does not seem to be receiving the attention it deserves.

Population related data may also be collected from sample surveys. There have been two one-round demographic sample surveys in Nigeria (Federal Office of Statistics 1968, and Ascadi, et al, 1972). It is a known fact that it is not possible to establish a trend from one-round single survey. A number of small-scale sample surveys on demographic patterns which are not national, had been carried out in some specific parts of the country. Such surveys are, however, too restrictive in terms of coverage and rather unrepresentative in a heterogenous society.

As has been succinctly stated (Adewuyi, 1980), the needed population data are lacking in Nigeria.

The data collected directly from sources mentioned above are either

> unreliable as in censuses; inadequate as in vital registration system' non-existent as the case with the population register or static and unrepresentative as those collected from sample surveys.

The attempt by Adewuyi (1980) to estimate Nigeria's population from the 1978 voter's register did not provide any reliable data. That author has this to say on his work. The inescapable conclusion is that the result from the 1978 voter's registration adds to the fruit less attempts so far made in this country to arrive at reliable population data base.

3. Primary School Enrolment

Looking at the various age groups in Nigeria today, only the primary school age group gives reliable actual data. This is the age group 6 to 12. In the developing countries, this age group accounts for about 18 to 22 per cent of the total population. Where, for whatever reasons, the population of a state is inflated, the percentage share of this age group will be smaller than 18. This is a good check on the reliability of the total population.

Let P represent Total Population and the age groups denoted by a,

The $P \pm a_1 + a_2 + \ldots + a_n$

Assuming each age group has a given percentage, then the knowledge of the actual number of persons in one age group would give a good insight into the composition of the other age groups. Where the actual number of persons in the age group is not fully known, the population of that age group is given by:

$a_i + ei$, where ei is the estimated part of the population of the ith age group. If the actual population (a_i) for the ith age group is fully known, ei will be zero.

For a state having 100 percent enrolment of primary school age children, the population data obtained from the population census can be compared with the actual enrolment figure for the age group (6–12). This test of internal consistency can be extended to secondary school age children where their 100 percent transition from primary to secondary school.

It is expected that by 1984 all primary school age children in Nigeria will be in school (Blue Print on Education 1978, p. 59). In which case, it will be possible to estimate the population of Nigeria, each State and every Local Government Area by multiplying the respective primary school enrolment by 100/20 or 5. With the location of primary school in every nook and corner of each district throughout the country and the effective machinery for the coordination of education statistics at each Local and State Government level, the population data from primary school enrolment are not likely to be manipulated. Moreover, there are various publications from which trends can be established so that any abnormal growth rate can be easily detected.

4. Bendel State Experience

With 100 percent enrolment in primary schools, the actual enrolment data have been found indispensable in the official estimation of the population of each local government area in Bendel State. Table 1 contains the distribution of population and actual school enrolment according to local government areas in Bendel. The relative percentage distribution is presented in table 2.

The projection based on the 1963 census is not reliable because its data base is weak. The inherent weakness in the data base for that census is too well known to be repeated here. Suffice it to say that apart from the weak data base, it does not appear realistic to use the so-called 5 percent and 2.5 percent magic wand to project the population of urban and rural areas, respectively. The fallacy surrounding the so-called 5 percent growth rate, uniformly applied in projecting the urban population, has been conclusively brought out in Sada's work (1980). Sada recorded the following growth rates: Lagos 13 percent, Port-Harcourt 10 Percent, Warri 9.6 percent, Kano 8.6 percent, and Benin 8.5 percent.

As revealed in column 7 of Table 1, Ughelli local government area and Oredo local government area have 28.4 percent and 38.2 percent, respectively, of the projected population in primary school in 1980/81. This proportion far exceeds the tolerable range of 18–22 percent. This seriously casts an initial doubt on the reliability of the data base for the projected population. For example, the age distribution based on the projected 315,610 and the actual data for primary and secondary school enrolment for Oredo local government area shows that persons who are 18 and above account for only 29.9 percent of the total population instead of the usual 52 percent or there about.

From Sada's works (1976, 1980), it is clear that the population of Benin-City, the headquarters of Oredo local government, was about 314,219 in 1976 and 425,000 in 1980 but the projected population in table 1 was only 315,610 for Oredo local government area in 1981. The projected population creates an abnormal situation whereby the part (benin-City with a population of 425,000 in 1980) is greater than the whole (Oredo local government area) with a projected population of 315,610 in 1981. The fallacy in projecting population from a weak data base is very glaring in this case.

From empirical evidence, we observe that the reliable percentage distribution of primary and post-primary schools among the local government areas has been steady for the years 1976 through 1981 except for Ughelli, Ethiope and Okpe local government areas because of the 1980 boundary adjustments. This provides a solid base for the alternative method of estimating the population of each local government area in Bendel State. Although we have actual data on primary and post primary school enrolment, we however observe that the data on the former appear to be more evenly

Table 1 Bendel State; Population and Actual Primary School Enrolment. 1980/81

S/No	Local govt. area	1963 Population	1981 Population		Primary Sch. Enrolment	Col. (6) over Col. (4) percent	Column 6 Over Col. 5 Percent
			Projected from 1963 Census	Official data based on School Enrolment			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Agbazilo	137,690	250,501	232,229	47,849	19.12	20.60
2.	Akoko-Edo	112,186	200,070	150,416	30,983	15.49	20.60
3.	Aniocha	105,022	186,417	192,601	39,678	21.28	20.60
4.	Bomadic) Riverine	108,331	179,137	148,328	7,728	4.31	5.21
5.	Burutu)	69,566	118,625	131,485	16,646	14.03	12.66
6.	Ethiope	134;609	217,440	207,515	42,737	19.65	20.59
7.	Etsako	135,135	230,595	275,266	56,708	24.59	20.60
8.	Ika	135,854	236,191	285,918	58,910	24.94	20.60
9.	Isoko	134,157	244,953	170,443	35,156	14.35	20.63
10.	Ndokwa	170,882	282,765	270,579	55,761	19.72	20.61
11.	Okpe	153,939	317,009	235,638	48,508	15.30	20.59
12.	Okpebho	133,213	228,362	240,731	49,753	21.79	20.66
13.	Oredo	129,239	315,610	585,472	120,618	38.22	20.60
14.	Orhionmwon	177,417	288,543	306,372	63,093	21.87	20.59
15.	Oshimili	75,122	163,416	104,823	21,564	13.19	20.57
16.	Ovia	130,455	211,545	206,236	42,502	20.09	20.61
17.	Owan	90,857	149,527	135,502	27,952	18.69	20.63
18.	Ughelli	203,188	347,481	293,162	60,432	17.39	20.61
19.	Warri	124,100	253,576	248,847	51,280	20.22	20.61
	Total	2,460,962	4,421,583	4,421,583	877,862	19.17	19.85

Sources: Column 5 is from the Ministry of Economic Development Benin City's Circular Letter No. SDC.120/292 of August 7, 1981. Primary School enrolment is from the Ministry of Education, Benin City.

Table 1 Bendel State: Percentage Distribution of Population and School Enrolment

Local Govt. Area	1963 Census	1981 Population		School Enrolment	
		Project from 1963 Census	Official Data from Enrolment	Primary 1980/81	Secondary 1980/81
(1)		(2)	(3)	(4)	(5)
Agbazilo	5.6	5.6	5.25	5.45	4.85
Akoko–Edo	4.5	4.5	3.40	3.53	3.79
Aniocha	4.3	4.2	4.36	4.52	6.22
Bomadi*	3.7	4.0	3.36	0.88	1.22
Burutu*	3.1	2.7	2.97	1.90	1.51
Ethiope**	9.6	4.9	4.69	4.87	4.39
Etsako	5.5	5.2	6.23	6.46	5.92
Ika	5.5	5.3	6.47	6.71	6.00
Isoko	5.4	5.5	3.85	4.00	4.41
Ndokwa	6.9	6.4	6.12	6.35	8.96
Okpe**	3.4	7.1	5.33	5.53	5.79
Okpebho	5.4	5.1	3.44	5.65	5.08
Oredo	5.2	7.5	13.24	13.74	12.11
Orhionmwon	7.2	6.5	6.93	7.19	6.30
Oshimili	3.0	3.7	2.37	2.46	3.80
Ovia	5.0	4.8	4.66	4.84	5.65
Owan	3.7	3.4	3.07	3.18	3.72
Ughelli	7.0	7.8	6.63	6.88	6.97
Warri	5.8	5.7	5.63	5.84	3.27
Total =	100	100	100	100	

Source: Table !

* Burutu and Bomadi are riverine areas. The Population is aging in the two LGA'S. Hence, the low ratio of school enrolment.

** A part of Ethiope was added to Okpe in 1980.

distributed in terms of accessibility to every local community. We find this a better yardstick for estimating the population of each local government area, than the imaginary growth rate for population projection derived from the 1963 census and its weak data base.

For states having less than 100 percent primary school enrolment, the use of primary school actual enrolment will also be helpful in estimating the population of each local government area under the assumption that the level of literacy within the age group (6–12) is relatively in a state. As schedule 4 (para 2 (1) of the 1979 Constitution makes it mandatory for local government to 'participate in the provision and maintenance of primary education', the proper estimation of the population of each local government area is therefore very important. The only parameter on which reliable actual data are available for each local government area is the primary school enrolment. We accordinly recommend its use for estimating the population of each local government area.

When every school age child is in primary school by 1984, it will be possible to estimate the population of Nigeria, as well as the component states and local government area. This parameter is also useful in testing the reliability of population census.

Summary and Conclusions

This paper attempts to highlight some of the main problems associated with population census in Nigeria. Various sources of demographic data are briefly examined but none is able to gave reliable population data for the country. As a test of the internal consistency and reliability of population census, we suggest the use of actual primary school enrolment which gives actual data by state and local government area.

Primary school age (6–12) children in a developing economy like Nigeria usually account for about 18–22 percent age group, represent about 20 percent of the total population. If by 1984 as scheduled in the *Blue Print on Education* (1978; 59) every child of primary school age is in school, it will then be possible to use this parameter to estimate the total population of Nigeria by multiplying the primary school enrolment by 100/20 or five. Since population census is conducted once in ten years, the actual primary school enrolment will be very useful in annual population estimates. With the effective coordination of the machinery for educational statistics at the local government and state levels, the possibility of manipulating the primary school enrolment data out of the normal trend, appears very remote. In Bendel State, for example, data on primary school enrolment have been found to be indispensable in estimating the population of each local government area (Omorogiuwa, 1981).

It may be mentioned that the use of actual primary school enrolment to estimate the total population of a developing country like Nigeria, local government and state, is only a palliative and not a substitute for a reliable, population census. However, primary school enrolment is one of the readily accessible actual internal demographic data sources for checking the reliability of population census.

Finally, to have a reliable population census in Nigeria, the issue should be depoliticized while the experts are given a free hand to conduct the census. Given the right atmosphere this paper submits that Nigeria has enough experts in demography and related fields to conduct a reliable and internationally acceptable population census.

The census issue is Nigeria's problem and only Nigerians can effectively solve it.

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22

Population Census in the Context of a National Demographic Policy

D. O. Ogbonna

AS everyone knows, Nigeria has the largest national population in the whole of Africa. However, as any demographer (or any social scientist for that matter) knows, the absolute size of this population is yet undetermined; its vital statistics, rate of change and age structure are still matters of conjecture, thus, it has been difficult to co-ordinate development objectives to population demands. This source of constant frustration can only be removed by a comprehensive national demographic policy of which both periodic and regular sample censuses and surveys are only an integral part. Without such a policy, obtaining specific relevant information about some vital components of the Nigerian population will always be frustrated by the familiar political, administrative and technical problems.

This short, paper will examine the philosophy basis, as well as the rationale for a demographic policy for Nigeria.

The governments of nearly all countries are committed to improving the welfare of their peoples, and population-related policies are one of the tools available to them for this purpose. In a sense, all the policies of a nation that involve the welfare of the nation's people are population policies, but more precisely, population policies should be concerned with issues related to changes in the quantity and quality of the population and its geographical distribution–changes in the numbers of human beings, their education and skills, and where and how they live relative to the space and resources available to each person. The rate of change of population size, the levels of fertility and mortality, the distribution of the people between urban and rural environments and the rate of change of this distribution significantly interact with the social and economic welfare of the people.

The first stage of policy will depend on a very considerable improvement in census and vital statistics and their analysis. In Nigeria however, previous censuses were never conceived as part of an overall demographic policy either in response to population-related problems of the day or to influence the course of population trend. Before independence, the colonial administration conducted what at best amounted to mere sample surveys and so resulted in very serious under estimations of the total population. Besides, the exercises were not motivated by a genuine desire to analyse the components and implications of the population for policy formulation. After independence, the population factor (i.e. number) became critical for revenue allocation so that during census exercises the dominant preoccupation is usually with number at the expense of the composition and dynamics of the population. The result is that a census exercise has become a dramatic event of every decade, and an occasion for great emotional expression all of which serve to defeat the essence and purpose of the exercise.

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* *Dr O. Ogbonna lectures in the Department of Geography, Ahmadu Bello University, Zaria.*

To overcome these difficulties, a national population policy needs to be formulated with emphasis in two directions. Such a policy, if vigorously and constantly pursued in line with other economic and social policies as part of the routine governmental activities and responsibilities, will de-emphasize the dramatic and emotional effects of a population census, thereby creating a conducive atmosphere for an objective count.

The first direction will be a set of population-responsive policies that will aim at ameliorating or overcoming the effects of compounding increases in population size and density. All indications are that the country is presently experiencing high birth rates, high population about which nothing is being done at present. Specific other social amenities in the crowded cities and towns and resource development are in this first category.

The second policy direction will be population influencing policies that will bring about a reduction in fertility and mortality and in growth rates, or will benefitially influence internal migration. Family planning programmes and other policies to reduce fertility, public health and nutrition programmes that lower mortality and transportation and industrial planning to influence internal migration and redistribution are in this second category.

It will be obvious that these population policy programmes cannot be formulated, let alone implemented, without a reliable census that not only determines the absolute number of people in this country, but also the imposition and characteristics of the population. Even under the best of circumstances, this enormous task cannot be adequately accomplished by relying solely on the farspaced decenial census periods. Such efforts must be supplemented by regular sample surveys and systematic registration and documentation of vital statistics by the health and social institutions. In this direction, too, the proposed national identity card, when and if properly executed, will make important contribution. The intervening cultural and financial obstacles in implementing these measures can be enormous but not forbidding. The time span over which governmental policies to creat public awareness of the holistic nature of our population issue can be expected to have major influence on accurate census taking will generally be longer than the time required for other kinds of development policies (such as increasing agricultural productivity, import substitution, industrial dispersion and diversification etc.) to accomplish their objectives. However, the cumulative impact of these policies, compared with the present state of impasse and controversy, can be very significant over one to two decades.

The point being made here is that as long as Nigerians think of a national census only in terms of population number which is critically vital for the sharing of the so called 'national cake', so long will it be near impossible to conduct an acceptable head count of the population. Therefore a new philosophy for the exercise should be not to let the public believe that everything depends on the census in terms of either regional or ethnic advantage. Often, in discussions of how to overcome our census problems, there are allusions and strong inclinations to the use of propaganda. Such propaganda usually stress the all-important role of population number for planning purposes and worked up to the point of frenzy by the press and other media of public information. But the word and action of propaganda threatens to create a credibility gap. If by propaganda we mean trying to persuade people that a certain policy is in their interest, without giving them the fact that will allow them to decide whether it is actually in their interest, such propaganda is usually regarded negatively as motivated by unfavourable ulterior motives. Census propaganda, just as orchestrated salary and wage review, have an unfavourable announcement effect in raising the people's expectations about possible personal or group benefits. But a census conducted quietly as part of a routine demographic policy exercise can hardly produce similar effects.

Census controversies are, in fact, not unique to Nigeria, simply because of the perversive nature of demographic issues. In the U.S.A. for example, census results (including that of 1980) are often the subject of intensive court battle on issues bordering mainly on arguments about undercounting and consequent loss of population. The resolution of such controversies has contributed immensely to the formulation of national policies. Unfortunately, the governments of Nigeria, which are commonly pressed almost beyond their capability by urgent day-to-day problems, have tended to put population problems and policies to deal with them into the limbo of things to be done when time permits or when the 'conditions are ripe'. Such time can never come on their own unless created. It is tempting therefore to suggest that since population policies are so important, fundamental and far-reaching, they should be the province of a special ministry of population at the cabinet level. However, since the essence of population problems is their pervasive character, population policies must also be part of the responsibility of the ministries that deal with education, health, agriculture, urbanization, transportation, labour, housing, welfare and even finance and defence. All these ministries need a sophisticated understanding of the ways in which population issues affect their areas of concern. The interests of these different arms of government should however be coordinated by jurisdictionally neutral but dministratively powerful unit of government that sets priorities in the light of politically established goals. This will be the responsibility of the present National Population Commission.

In concluding this short presentation, it is important to point out that we have deliberately concentrated on the overriding need for the development of demographic policy as if its lack was the only reason for our continuing census nightmare. Our justification lies in the fact that the attitudes of the Nigerian people with regard to their conceptualization of the usefulness or otherwise of a census exercise are directly and profoundly affected by the kind of policy adopted by the government. Even the strongest of these attitudes–ones which emanate from political, cultural and ethnic considerations–can be modified eventually by a multi-faceted demographic policy. Thus the real issue becomes the formulation and implementation of policies that collectively influence the devergent cultural and sociological as well as political beliefs of Nigerians in a way that is less traumatic and sensational. Just as, for instance, the government's industrial policy sets out the goal and methods of achieving an industrial revolution in this country, so also will a clearly defined population policy eliminate some of the difficulties encountered in any conduct of a national census.

23

Philosophy of Population Census*

Definition

A POPULATION ccensus is the process of collecting, compiling, evaluating, analysing and publishing or otherwise disseminating demographic economic and social data pertaining, at a specific time, to all persons in a country or in a welldelimited part of the country.

Human population is basic to the production and distribution of material wealth, to the planning for, and carrying out of economic and social development, administrative activity and scientific research. It is therefore essential to have reliable and detailed data on the size, distribtuion and composition of population. The population census is a primary sources of these basicmark statistics, covering not only the settled population but homeless persons and nomadic groups as well. Data from population census may be presented and analysed in terms of statistics on persons, married couples, families and household and a wide variety of geographical units ranging from the country as a whole to individual small localities or city blocks.

A census implies that each individual and each living quarter are enumerated separately, and that their characteristics are separately recorded. Only by this procedure can the data on the various characteristics be cross-calssified. Individual enumeration foes not preculude the use of sampling technrcs for obtaining data on specific characteristics, provided that the sample design is consistent with the size of the area for which the data are to be tabulated and the degree of detail in the cross-tabulation. The following attributes are required of a national population census:

(a) University Within a Defined Territory

The census should cover a precisely defined territory (e.g. the entire country or a well-delimited part of it). The population census should include every person present and/or residing within its scope, depending upon the type of population count required. The housing census should include every living quarter, irrespective of type.

(b) Simultaneity

Each person and each living quarter should be enumerated as nearly as possible in respect of the same well-defined point of time, and the data collected should refer to a well-defined reference period. The time reference period used, however, need not be identical for all of the data collected.

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* *This paper was prepared by the Ministry of Economic Development, Bornu State, Maiduguri. (Presented by the Statistics Division).*

For most of the data, it will be the way of the census, in some instance, it may be a period prior to the census.

(c) Defined Periodicity

A census should be taken at regular intervals so that comparable information is made available in a fixed sequence. A series of censuses makes it possible to appraise the past accurately describe the present ans estimate the future. It is recommended that a national census be taken at least every ten years. Some countries may find it necessary to carry out censuse more frequently because of the rapidity of major changes in their population and/or its housing circumstances.

Uses of population censuses

Policy planning and administration

The fundamental purpose of the population census is to provide the facts essential to government policy makers, planners and administrators. Information on the size distribution and characteristics of a country's population is essential to assess its economic, social and demographic circumstance and to develop sound policies and programmes aimed at fostering the welfare of a country and its population. The population census, by providing comparable basic statistics for a country as a whole and for each adminstrative unit and locality therein, can make an important contribution to the over-all planning process and the management of national affairs. Population census results are also used in policy development and in management and evaluation for programmes in such fields as education and literacy, employment and man-power, family planning, housing, material and child helth, rural development, transportation and highway planning, urbanization and welfare.

In addition to serving specific governmental policy purposes, the population census provides indispensable data for the scientific analysis and appraisal of the composition, distribution and past and prospective growth of the population—the changing patterns of urban-rural concentration, the development of urbanized areas, the geographical distribution of the population according to such variables as occupation and education, the evolution of the sex and age structure and the mortality and natality differentials for various population groups, as well as the economic and social characteristics of the population and labour force.

In addition to those given above, the census has many important uses for individuals in research instituions, business, industry and labour. Reliable estimates of consumer demand for an everexpanding variety of goods and services depend on accurate information on the size of the population in subnationak areas and its distribution at least by age and sex, since these characteristics heavily influence the demand for housing, furnishing, food, clothing, recreational facilities medical supplies and so fourth. Furthermore, the local availability of labour for the production and distribution of such commodities and services may be important in determining the location and organization of enterprises.

The rapidity of current changes in the size and other characteristics of population and the demand for additional detailed date on social economic and housing characteristics that are not appropriate for collection in a full-scale census have brought about the need for continuing programmes of intercentral household sample surveys to collect current and detailed information on many topics.

Sometimes such a sample inquiry may be the only means available of obtaining bench-mark housing data.

Population census in Nigeria

Discussed above are the general views on population censuses and their importance. A question then arises "Is the situation highlighted above the same with population census in Nigeria?" The question is left unanswered, of course, some factors against the population census condudcted in Nigeria are discussed.

Sources of Population Data in Nigeria

Generally speaking, there are two broad sources of population data in a given delimited territory or part thereof these are:

1) data on the state of population at any given time, which includes its area and structural distribution, and;
2) data on the movement of the population in time and space, consequent upon the interaaction of demographic forces of fertility, mortality and migration. The first type of data are collected by static method, principal amongst is the population census defined above, others are sample surveys, enquirires etc., in which case population is enumerated or estimated.

   The second type of data are usually obtained through dynamic method which are continous registration of observation of vital events aimed at measuring the dynamic nature of population.

Planning and Preparation

Whether a census covers the entire population of a nation or just some segments, it involves four steps viz:

- planning and preparation;
- gathering the facts;
- compilation and presentation of the data and;
- evaluation of the entire procedure.

In Nigeria, however, the organization of a national census is within a framework established by legislation and to be executed by the National Population Commission. The extent of the plans and preparations for a census will depend upon the information being sought and the funds made available for the purpose. It is necessary, at the onset, to fix a date for census so that an unsuitable period will be avoided, like the planting and harvesting period or when the climate is unconducive or harsh. Consideration must be given to the forms of the census schedule, the procedure for collecting the data, the most efficient meand so tabulating and interpreting the returns and the establishment of a control unti for the total coverage of the area and persons to be counted.

Before conducting any census, organizations and individuals concerned should be consulted to harmonize what information should be collected. In order to achieve these aims, the general public has to be enlightened to discourage any delatory attitude from them.

A test census on sample basis, before embarking on the actual census is suggested. This is to judge the preferability of the proposed draft, particularly with regards to new topics and to estimate costs and subsequent procedure. The importance of planning is to achieve the preparation of maps, lists of dwellings areas and other related tools that may aid controlling and simultaneity of enumeration. Thus planning is a pre-requisite for an efficient and economic operation.

Procedure for collection Data

The procedure followed in the actual count of the 1963 census was by enumeration, whereby trained and paid enumerators moved from dwelling to dwelling within a specified area questioning each individual or family head. In some advanced countries like Europe, a self-enumeration method is used as secondary procedure for taking census. This method is very advantageous in the sense that it gives ample time to fill in the details of the schedule, with smaller change of missing household members, who may be temporarily absent. The method could be disadvantageous if the details in the schedule are not straight forward to eliminate lack of interest or willingness. But by implication, this method is practiceable in literate societies, unlike Nigeria where the rate of illiteracy is very high. Until the public became enlightened, the method of direct reporting which has been in existence since 1911, will continue to prevail in Nigeria. The method of direct reporting, has the advantagge of accurate recording by trained enumerators which eventually enhances the quality and uniformity of operation, but the training required is costly while the accuracy and completeness of the census depends on the efficiency and the pay of the enumerators.

This explains unreliability of 1952/53 and 1963 censuses, where trained and competent enumerators were virtually non-existent in some parts of the country. However, this problem can now be easily solved if the panel on the census experiments with National Youths Corps members as enumerators.

Compilation and Presentation of Data

With reference to the population census conducted in Nigeria, the procedure being adopted is to have field supervision of the enumerators, who coordinate enumeration and correct obvious errors as soon as possible. The returns are then forwarded to the district/divisional census officer for further scrutiny to ensure proper entries and consistences in the return before passing it to the census bureau. At the census bureau the entries expressed verbally are codified such as occupation and industry for easy tabulation. After this, computer editing follows, and the output is reviewed by experts for reproduction in the published report. The demographic and socio-economic characteristics of the population, already tabulated are sent to experts in the various fields for examination and comparisons with previous census results and with other sources of information to check inconsistences and/or unreasonable results, and if found devoid of errors, are publisued with explanatory text for public use.

Relevance of population data in Nigeria

The two sources of population data as outlined above are not adequately developed in Nigeria. Before 1911 when the first partial census was undertaken, population figures were estimated based on secondary sources which include:

a) Oral evidence from local historians, legends, folktales and linguistic evidence of various communities tracing their descendants,–estimates of the human population could be made, but absolute number sizes are not available.

b) Intelligence reports–written by colonial provincial or divisional administrators, colonial record officers, reports by several travellers and musicians.

c) Archealogical findings–early works of arts, artifacts city walls and settlement patterns give an idea of the existence of humen population in a given locality like the Nok culture of Central Nigeria.

d) Semi-official reports and records that deal with a segment of the population. These include various records of organizations with sizes of membership, age, and sex weekly service prayers, marriages, baptisms and death records. They include also hospital records counts and similar registry records of schools, tax offices etc. Most of these records suffer from selectivity.

e) Individual sample survey including reports of practical projects, feasibility or evaluation studies regarding rural and urban development, water supply, irrigation, dams and settlement schemes.

These sources served as bases of population data in most parts of Nigeria. However, in 1871 there was a partial count of Lagos, the exercise was later extended to other urban centres in the country and this led to the introduction of census by 1911; with less comprehensiveness in the actual sense of census taking. This census continued till 1931, with a ten-year interval which was interrupted by the Second World War in 1941.

These series of census were indequate in several aspects. The enumeration procedures were crude, like the case of counting the people through tax paying. There was no established functional relationship between the member of huts or tax payers and the number of people in a given household. Even the population of another in the same country as communities life styles differ in terms of housing. Another limitation of the pre 1952 census was the limitation placed on the number of socio-economic variables included in the schedule, thus rendering the data inadequate for socio and economic planning. The most relatively objective census count in Nigeria was that of 1952 /53. Although it lacked simultaneity as it was held in three different periods, and for the then three regions, it was the real first count in many parts of the country. Some variable like occupational groups literacy and religion were included in the questionaire. It wasn't possible to construct population age pyramid, as ages were not singly recorded. The records of ages were 2–6, 7–14, 15–49, 50 and above. However, regional age comparison can be achieved as well as the nature of the potential labour force and fertility from the age group 15–49 years. The occupational grouping was very broad, six occupational groups for men and three for women were broadly used. The tribal groupings were also broad.

Following the 1952/53 census was that of 1962 controversial count which was not officially published for public consumption. The 1963 census was not better, as has been verified by some independent research works. An over-count of over 100 percent has been indentified in some part of the country. For instance the 1962 census reported the population at 45.3 million, and this rose to 55.6 million in 1963, a difference of about 10 million. This is very doubtful. The implied population increase from 1952/ 53 to 1963 of the order of 5.7 percent per annum does not confirm with the

2.5 percent rates estimated for the developing countries. This has hindered the country from having any reliable projections for labour force, employment and unemployment. Thus, the reliability of the Nigerian censuses is quesionable. The desire for better demographic information in Nigeria required that another census was adequately made and publicized, the census returns became a controversial issue and was not officially published for public consumption.

Causes of Controversy

The major causes of controversy in the 1973 census have been traced to the part played by the politicians who publicized and narrated the objectives of census in terms of electoral registration and national revenue allocation. This encouraged overcount in most cases. For future consideration therefore, there should be a consensus between the political parties, with regard to the need for another population census in Nigeria.

In addition to above, the attitude of both the enumerators and the people counted militated against adequacy in the returns. Ignorantly, most of them failed to appreciate the need for accuracy in reporting ages, and other personal socio-economic characteristics, thereby rendering most of the census data inadequate for meaningful social and economic planning.

Also noted during the last census was the lack of proper motivation on the part of local leadership to give correct data. Not only this, some public institutions did not cooperate with the census officials. It is important to have mutual understanding among census officials and enumerators. The need for accurate census data is now overdue in Nigeria, and in order to achieve this there is the need to enlighten the public on the importance of accurate data. Both census data and vital statistics are of much importance to individuals, organisations, the government, as well as research workers.

To the individual information from census data and vital statistics provide bases to determine age, place of birth, citizenship and to legally prove family relationships. Decisions leading to administrative location are based upon data avaialbele from census data and vital statistics. The social and welfare services administered by the government, such as schools housing projects require population data for their proper functioning. National policies relating to immigration, agriculture and proper development are based among other things, on population data. Plans for national defence involve a close scrutiny of population data in order to make the most effective use of the country's manpower. Business relies upon population data and vital statistics to ascertain the location and characteristics of markets, while students of social and economic changes rely heavily on population data and vital statistics in any aspect of planning.

With reference to historical facts on population census in Nigeria, it is not difficult to conclude that the inefficiency in the performance of our development efforts are attributable to the inadequacy of relevant and reliable data on population and its characteristics. It is high time we plan for efficient census based on wider public enlightenment and cooperation.

Discussion VII

EVALUATING HUMAN RESOURCES THROUGH CENSUS

(Mr. S.O.K. Mbonu, Chairman)
(Dr. T.D.R. Kaloko, Rapporteur)

The following format was put forward by the chairman around which the discussion was organized:

- definition of human resources
- characters of human resources/population
- evaluation of human resources through census
- recommendations

Definition of human resources

Major Udoiwod, Commissioner, National Population Commission, stressed the point of acquirring a qualitative census with a view to knowing how many people we have in the country and how the people can be effectively exploited for meaningful development of the country. After much debate, the group decided to define *evaluation and human resources* separately because their comprehension was seen to be crucial to the group's theme.

Evaluation was then seen as a measurement of the worth, or value of the human resources and in this case the population in the country. This measures the quality and quantity of the identifiable resource.

Human resources on the other hand refer to the individual characteristic in the population. Or rather simply, it refers to number of pwople in particular areas within the country and their distributional pattern, for example the number of adults and children, number of men and women, levels of education, etc.

Characteristics of Human resources

The United Nationa *Handbook* clearly indicates the characteristics of human resources that should be included during population census. The group, however, flet that the following characteristics of our human resources should be considered as paramount:

(1) Demographic characteristics
a) age and sex distribution
b) marital status
c) marriages
d) fertility and mortality, etc

(2) Economic characteristics

a) Income
b) Employment
c) Occupation

(3) Housing characteristics

(4) Educational characterisitics

a) Level of school and qualification obtained
b) Student/pupil population by type of school.

(5) Psychological and cultural characteristics

a) Attitudes
b) Desires
c) Values, etc.

(6) Health

There are also other examples that have been considered in the papers that were presented in this conference by Uche, Okoro, Akintoye, and Arowolo.

Evaluation of Human Resources Through Resources

The group holds the view that evaluation of human resources is seen as a way of assessing the quality and importance of the available resources with a view to effecting meaningful development in the country.

It was however, cautioned that human resources do not operate in isolation. Rather they are influenced among other factors by the environment and attitudes of the people. For example, it is important to identify the ability of the some of the Nigerian population in influencing its seeming hostile environment.

This sub-theme also involves a process of finding out the kind of resources we have in the country, for example, knowledge of age distribution is important in order to plan the type and number of schools to be established in different parts of the federation.

The group also observed that population can refer to objects and even animals, and that census could mean a count of these. It is the group's view that the United Nations' definition of *population and census* as already defined in Dr. Makinwa's presentation in this conference should serve as a working definition.

Recommendations

The importance of human resources in development planning has been accepted throughout the world. This means for affective socio-economic planning, the characteristics of human resources must be complete and understood by the generality of the population. This group strongly holds this conviction, and therefore suggests that a seminar should be conducted by the National Population Commission (NPC) where the *census questionnaire* will be thoroughly discussed.

Items contained in the census questionnaire will be thoroughly examined to ensure that all information required for meaningful development has been included. It was also the group's view that the public should be educated on the meaning of the items that will be included in the census questionnaire.

The group appreciates the limited facilities available to the National Population Commission. However, it is suggested that the Commission look into the possibility of ensuring that all school-age children should produce their birth certificates before enrolment. This suggestion is made in light of the paper presented to this conference by Dr. P.A. Omorouiwa. However, where the production of a birth certificate will militate against attendance by children from a particular place, the Commission should make alternative arrangements.

example, the characteristics of female [illegible] [illegible] will be understood by the [illegible] of the [illegible]. The [illegible] [illegible] the committee and therefore suggests that a [illegible] [illegible] by the National Population Commission (NPC) [illegible] the [illegible] [illegible] will be thoroughly discussed.

Items contained in the census questionnaire will be [illegible] [illegible] to ensure that all information required for [illegible] [illegible] [illegible] included. It was also the group's view that the [illegible] [illegible] the [illegible] of the [illegible] [illegible] [illegible] [illegible].

The group appreciated the [illegible] [illegible] of the National Population Commission. However, it [illegible] that the Commission [illegible] the possibility of ensuring that all [illegible] children should [illegible] birth certificates before enrolment. This suggestion [illegible] paper presented to the conference by Dr. P. A. [illegible] [illegible] the [illegible] of [illegible] [illegible] [illegible] [illegible] collected from a [illegible] [illegible] the Commission should make [illegible] arrangements.

[illegible]

[illegible]

[illegible]

[illegible]

Appendices

Appendix I

Recommendations to the Plenary Session

Chairman – Mr. S.O.K. Mbonu

The discussion was centred on 3 broad items: –

1. Meaning/Definition of Population Census,
   Advantages and Disadvantaged of Defacto/De jure methods of Enumeration.
2. Types of Data to be collected.
3. Utility of the data to be collected.

Deliberations

There was a concensus of opinion that the definition contained in Dr. P. Kofo Makinwa–Adebusoye's paper titled:
"Communication and the National Census" (Chapter 8) is adequate, namely that

> A census of population is the simultanous recording of demographic data by the Government, at a particular time, partaining to all the persons who live in a particular territory

In other words, a census is a snapshot of the population at a given time.

Defacto or De jure method

After an exhausive discussion on the merits and demerits of these tow techniques, considering the fact that we are interested in an accurate census, it was agreed that since one of the uses of the ceneus data is for effective planning, and we plan for people where they normally reside, the defacto method was preferable to the other method. In this connection it was noted, that although the two methods are capable of manipulation, the defacto method is less vulnerable. The de jure method is less more likely to introduce a lot of falsification of the census data in the sense that one could be counted in more than one place, namely, his place and his place of usual residence.

It was therefore recommended that people should be counted in their places of residence while markets and some other public places should be closed for the period of the census.

It was noted that politicians are anxious that the de jure method be adopted so that indigenes from their constituencies should travel home to be counted in order ot swell the size of their constituencies. This situation was previously abused. Since what is required is an accurate census, the politicians should be adequately educated on the importance and advantages of accurate census.

Types of Data to be Collected

Two possible approaches to data collection were considered, namely narrow and comprehensive approaches. The former has the advantage of saving time and minimizing falsification of information by enumerators, but may not provide us with the much needed data for planning. On the other hand, the comprehensive approach is capable of engineering boredom and falsification of data by enumerators. However this approach will ensure the collection of data requisite for development. The problems associated with the latter can be minimized through collection of some of the data required during sample surveys to be conducted by the enumerators, say a week or so before the census. By so doing, the number of items on the actual census questionnaire will be reduced.

Report of Discussion Group B

Education the Public about the Census

(1) Members of the Groups
Hon. J.T. Bukar
Dr. Akinkoye
Mr. Tukur Baba
Mr. I.A. Akinola
Alhaji Alkaleri
Mr. S.O. Adekanye
Mr. Osemeka
Dr. Emereuwaonu
Mrs. J. Bukar
Lady D.O. Jibowu – Chairman
Dr. Kadejo – Rapporteur

The Nigerian Population Commission Chairman was present for a short time. The topic was discussed under the following headings:

- The Message
- The Target audiienc
- Method
- Resources
- Timing
- Evaluation

The Message

The group recommended that the objective of the message should be:

To create an awareness of the importance of this particular census exercise.

The committee felt that the UN *Handbook* on census contains a comprehensive list of information to be collected during the census. It recommends that this be modified in the light of our present rate of development and used during the next census. It noted that some of the papers presented during the conference delat at length on this subject and recommends that these should be taken into consideration when designing the questionnaore for the next census. Such a questionnaire should be discussed at a seminar by experts. The following broad categories of data to be collected were recommended:

1. Personal characteristics–age, sex, marital status. home places, place of birth, place of residence etc.
2. Social characteristics–education, religion, ethnic origin, language etc.
3. Economic characteristics–occupation, industry, labour force participation income.
4. Housing–details of these could be worked out by the commission.

Uses of the Data

Data collected could be used for the following:–

1. For planning purposes;
2. For administrative purposes especially the political consideration;
3. For research.

Various papers presented have indicated the various uses to which the data can be put.

The wording of the message will difer from one target audience to the other.

Target audience

legislators
administrators
trainers
mass media specialists
business and industrial organisations
technical officials of all grades
professionals
personnel of communication units
enumerators and other field workers connected with census taking.

religious leaders
voluntary agencies
voluntary organisations (religious, political or social)
community leaders
labour unions
teachers
students
the public at large in cities, villages and hamlets.

Methods

Through mass communication media (radio, T.V. newspapers, films, magazines and other periodicals etc.)
interpersonal communications
letters
training courses
seminars
group discussions
slides and other teaching aids.
text boos
reports
handouts
posters
outdoor billboards/Notice Boards
cartoons
slogans
logo
permanent signs on buses, taxies etc.
Demonstrations, exhibitions, songs, drama, dance troups. etc.
The method to be used will depend on the target audience.

Resources

Human Resources

(1) The group has recommended the establishment of a public enlightenment unit within the National Population Commission.

(2) The group has also recommended the appointment of An ad hoc *National Public Enlightenment Committee* with a membership of 7–9 persons representing a wide range of interest. (Representatives of the Press, Ministry of Information, NTA, etc.) Terms of reference are:

1. To publicize, educate and inform the public about population census and
2. To periodically evaluate the effectiveness of the programme

and techniques employed. The Public Enlightenment Committee is to be replicated at state and local government levels this is to allow for free flow of information to and from grassroot level.

Appendix II

List of Participants

No.	NAME	ADDRESS
1.	Abubakar, A. (Mr.)	National Population Commission Minna–Niger State
2.	Adamu, S.O. (Prof.)	Department of Statistics, University of Ibadan.
3.	Adegbola, O. (Dr.)	Department of Geography, University of Lagos.
4.	Adekanye, S.O. (Mr.)	Min. of Econ. Development, Statistics Division, Ilorin.
5.	Adekunle, G.A. (Miss)	Sociology Department, University of Ibadan.
6.	Adekunle Christie (Mrs.)	National Population Commission Lagos.
7.	Adesina, H.O. (Dr.)	Dept. of Environmental Sciences, Polytechnic, Ibadan.
8.	Adeola, Basiru (Alhaji)	*Nigerian Observer,* Ibadan.
9.	Aderanti, Kayode (Mr.)	Sociology Dept., University of Ibadan.
10.	Afolayan, A.A. (Dr. Mrs.)	Geography Dept., University of Ibadan.
11.	Agbinda, S. Ikyegh (Mr.)	N.T.A. Makurdi, Benue State.
12.	Ajayi J. Ade (Mr.)	Min. of Econ. Planning, Statistics Division Sec., Ibadan.
13.	Ajayi S.A. (Mr.)	*Concord* Press, Ibadan.
14.	Ajewole A. Olaside (Mr.)	Dept. of Sociology, University of Ibadan.
15.	Akingbade P.O. (Dr.)	National Assembly, Office of the Leader of Senate.
16.	Akinjobi Kadejo (Dr.)	National Population Commission Surulere, Lagos.
17.	Akinola, I.A. (Mr.)	National Population Commission Computer Division, Surulere,

		Lagos.
18.	Akinkoye, O. (Dr.)	Dept. of Sociology, University of Ibadan.
19.	Akinsanya, O. (Mr.)	National Population Commissin Surulere, Lagos.
20.	Alaneme, S.O. (Mr.)	National Population Commission Surulere, Lagos.
21.	Alkaleri, Umaru A. (Mr.)	National Population Commission Bauchi.
22.	Aminu, Ahmed (Mr.)	Radio Nigeria, Kaduna.
23.	Andrew, O.A. (Mr.)	Nigerian Television, Jos.
24.	Angaye, G. (Dr.)	Dept. of Economics, College of Education, Port-Harcout.
25.	Anyanwu, C.N. (Dr.)	Dept. of Adult Educ., University of Ibadan.
26.	Arowolo, O.O. (Dr.)	Dept., of Sociology, University of Ibadan.
27.	Awari, Biodun (Mr.)	*Daily Times,* Ibadan.
28.	Awogbemi, (Mr.)	Min. of Econ. Planning and Land Matters, Secretariat, Ikeja.
29.	Amungo, F.A. (Mr.)	National Population Commission Port-Harcourt.
30.	Ay, Petu (Dr.)	I.I.T.A., Ibadan.
31.	Baba Tukur, M. (Alhaji)	Dept. of Sociology, University of Sokoto.
32.	Bamidele, Hassan (Mr.)	Dept. of Sociology, University of Ibadan.
33.	Bilgrami, Q.A. (Mr.)	Dept. of Management Studies, The Polytechnic, Ibadan.
34.	Boyejo Ayinde (Mr.)	N.T.A. Abeokuta, Ogun State.
35.	Bukar Joan Rose, (Mrs.)	Bauchi State House of Assembly.
36.	Jonah Tumbai (Hon.)	Bauchi State House of Assembly.
37.	Carrena, T.W. (Mr.)	Min. of Econ. Planning and Land Matters, Lagos.
38.	Dakup, Sati Juman (Mr.)	Dept. of Econ. Planning, Statistics Division, Jos.
39.	Dairo, I.S.B. (Mr.)	National Population Commission

		Surulere, Lagos.
40.	Daramola, O. (Mr.)	National Population Commission Surulere, Lagos.
41.	Duze, M.C. (Dr.)	Sociology Dept., Bayero University, Kano.
42.	Ebereonwu, E.O. (Mr.)	National Population Commission Surulere, Lagos.
43.	Edet, J.O. (Mr.)	N.T.A. Zone C, Calabar.
44.	Ekpe, M.J. (Mr.)	Min. of Econ. Planning, Calabar.
45.	Emeh, R.N. (Mr.)	Ministry of Econ. Dev. Owerri, Imo State.
46.	Emereuwaonu, E.U. (Dr.)	Dept. of Sociology and Anthropology, University of Benin.
47.	Esemudje, O.A.N. (Mr.)	University of Ibadan.
48.	Eze, J.O.N. (Dr.)	Dept. of Geography, Nsukka.
49.	Ezenwafor (Mr)	National Population Commission Surulere, Lagos.
50.	Falodun (Mr)	National Population Commission Surulere, Lagos.
51.	Fakolade, F.R. (Mr.)	Sociology Dept., University of Ibadan.
52.	Fasanu, I.I. (Mr.)	University of Ibadan.
53.	Fasoro, Ayo (Mr.)	National Population Commission Surulere, Lagos.
54.	Gandonu, Ajato (Dr.)	I.L.E.P.S., 15 Gerrard Road, Ikoyi – Lagos.
55.	Godwin, A. Ogwuma (Mr.)	National Population Commission Owerri, Imo State.
56.	Isaac, Daramola (Mr.)	*Daily Sketch,* Ibadan.
57.	Ilesanmi, Femi (Mr.)	*Nigerian Chronicle,* Ibadan.
58.	Iyahen, S.O. (Prof.)	National Population Commission Benin City.
59.	Iyaniwura, O. (Dr.)	Dept. of Statistics, University of Ibadan.
60.	Iyiola, Lawal (Mr.)	*Nigerian Herald,* Ibadan.
61.	Jalo, Waziri (Senator)	National Assembly, Senate,

		Lagos.
62.	Jibowu, D.V. (Chief, Lady)	National Population Commission Ondo State.
63.	Jimoh, K.O. (Mr.)	National Population Commission Surulere, Lagos.
64.	Kesiena Agori-Iwe (Dr.)	Bayero University, Kano.
65.	Kalolo, F.R. (Dr.)	Dept. of Geography, University of Maiduguri, Bornu State.
66.	Lala, Sola (Mr.)	Radio Nigeria, Ibadan.
67.	Maduka, R.O. (Mr.)	N.T.A. Channel 6, Owerri–Aba.
68.	Mahmud, S.A. (Alhaji)	Min. of Econ. Development, Kaduna.
69.	Maitambari, Usman (Mr.)	National Population Commission Sokoto.
70.	P. Kofo ,Makinwa-Adebusoye (Dr. Mrs.)	Censer, University of Benin.
71.	Mamman, Y. (Mr.)	N.T.A. Kaduna.
72.	Mbonu, S.O.K. (Mr.)	Min. of Econ. Dev. and Planning Enugu.
73.	Morah, B.C. (Dr.)	National Population Commission Lagos.
74.	Nagode, S.A. (Mr.)	Resident Commissioner, National Population Commission, Ilorin.
75.	Ndonya, N.F.	Min. of Econ. Development, Yola.
76.	Nduanya, M.O. (Dr.)	National Population Commission Enugu.
77.	Obikeze, D.S.	Dept. of Sociology, University of Nigeria, Nsukka.
78.	Ogunlade, S.A. (Mr.)	National Population Commission Surulere, Lagos.
79.	Oduola, S.O. (Dr.)	N.I.S.E.R., Ibadan.
80.	Ogunsami, E.O.	*Punch* Nigerian Limited
81.	Ogbonna, D.O. (Dr.)	Dept. of Geog., A.B.U. Zaria.
82.	Ojo, O.H.	Dept. of Sociology, University of Ibadan.
83.	Okiyi Afam, S. (Mr.)	News Agency of Nigeria, Ibadan.

84.	Okoroafor, C.O. (Mr.)	National Population Commission Owerri, Imo State.
85.	Okoroafor, A.E. (Dr.)	Dept. of Econs., University of Nigeria, Nsukka.
86.	Okore, A. (Dr.)	Dept. of Econs., University of Nigeria, Nsukka.
87.	Olaofe, G.O. (Dr.)	Maths. Dept. University of Ibadan.
88.	Olaofe, K. (Mrs.)	Computing Centre, University of Ibadan.
89.	Oladoyinbo, P.O.	University of Ibadan.
90.	Olakoyode, H.	University of Ibadan.
91.	Olatunji, Bamidele (Mr.)	Radio Nigeria, Ibadan
92.	Olayinka, M.D. (Mr.)	National Population Commission Lagos.
93.	Olayinka, R.O. (Alhaji)	Radio OYO, Ibadan.
94.	Oleru, J. O. (Mr.)	Dept. of Econs., University of Nigeria Nsukka.
95.	Olomajeye, J. A.	Fed. Min. of National Planning, Lagos.
96.	Olorunfemi, J. F. (Dr.)	Dept. of Geography, University of Ilorin, Ilorin.
97.	Omorogiuwa, P. A. (Dr.)	Dept. of Econs and Statistics, University of Benin, Benin-City.
98.	Onuoha, R.O. (Mr.)	National Population Commission Surulere, Lagos.
99.	Omitade, S. O. (Chief)	National Population Commission Ibadan.
100.	Olatunbosun, D. A. (Prof)	Dept. of Chemical Pathology, University of Ibadan.
101.	Orubuloye, I.O. (Dr.)	N.ISER, Ibadan.
102.	Osagie, S. O. (Mr.)	Dept. of Sociology, University of Ibadan.
103.	Osemeka, J.O. (Mr.)	Min. of Econ. Dev. & Planning, Enugu.
104.	Oseloka, N. (Mr.)	Anambra Broadcasting Corporation, Enugu.

105.	Osuagwu, C.O.	Dept. of Sociology, University of Ibadan.
106.	Oyeneye, O.Y. (Dr.)	N.I.S.E.R., Ibadan.
107.	Patari Waye Hon.)	Bauchi State House of Assembly
108.	Paul Alade (Mr.)	*National Concord* Office, Ibadan
109.	Pittin, Renee (Dr.)	Dept. of Sociology, A.B.U.
110.	Sanda, A. (Dr.)	Social Dev. Div., NISER, Ibadan.
111.	Sanda, Olaoye (Comrade)	Dept. of Lang. & General Studies The Polytechnic, Ibadan.
112.	Shehu, Ringim (Mr.)	National Population Commission Kano.
113.	Shogaohi, A.O. J(Mr.)	National Population Commission Surulere, Lagos.
114.	Sola, L.O. (Mrs.)	Fed. Radio Corp. of Nig., Ibadan
115.	Soroye, Segun (Mr.)	N.T.A., Ibadan.
116.	Suleiman, H. (Mr.)	Governor's Office, Department of Budget, Kano.
117.	Sylvanus, N. (Mr.)	*The Nigerian Standard,* Jos.
118.	Taiwo, Akintoyosi (Mr.)	National Population Commission Ibadan.
119.	Uche, Chukwudum (Dr.)	Dept. of Sociology and Anthropology, University of Benin.
120.	Udoiwod, N.J.A. (Hon. Com.)	National Population Commission Lagos.
121.	Uyanga, Joseph (Dr.)	University of Calabar, Calabar.
122.	Wapdiyel, D.G.	Fed. Dept. of Fisheries, Jos.
123.	Zubairu, Salihi (Mr.)	Dept. of Budget, Kano.